The Journal of the American Osteopathic Association

SEPTEMBER 1961 • VOLUME 61

Convention report number

Presidential acceptance address

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CONVERTS CARDIAC ARRHYTHMIAS

NEW CARDIOQUIN®

Quinidine Polygalacturonate, Purdue Frederick

TABLETS

SMOOTHLY MAINTAINED THERAPEUTIC BLOOD LEVELS are an outstanding advantage of quinidine polygalacturonate.[1] With single doses, measurable blood levels appear within 1 hour, reach full therapeutic range in about 4 hours.[1] Blood levels tend to remain uniformly constant with maintenance doses.

CLINICAL STUDIES SHOW NO "PEAKS AND VALLEYS," typical of the multiple doses of other quinidine preparations (quinidine sulfate, quinidine gluconate, etc.).[2,3] 'Cardioquin' Tablets produce more uniform blood levels with but a single peak and a *slow, gradual decline* over 24-48 hours.[1]

UNIFORM RATE OF ABSORPTION is *inherent* in the molecular structure of quinidine polygalacturonate.[1] 'Cardioquin' Tablets are *not* sustained-release tablets, nor do they depend on mechanical contrivances such as enteric coating.

OUTSTANDING GASTROINTESTINAL TOLERANCE to 'Cardioquin' Tablets is due to their slow, steady rate of dissociation, which avoids the irritating flooding of the gastrointestinal tract with inorganic ions. Moreover, the unabsorbed polygalacturonate moiety acts as a buffer and a demulcent.[1] *'Cardioquin' Tablets therapy is virtually free of the undesirable gastrointestinal reactions common to quinidine, such as diarrhea, nausea, and vomiting.*[1,4,5]

FULL QUINIDINE CARDIODYNAMICS of 'Cardioquin' Tablets are demonstrated, on the dose for dose basis, by ECG changes[1,4,5] and by a high percentage of successful conversions of arrhythmias.[1,4,5]

WIDER RANGE OF EFFECTIVENESS is possible with 'Cardioquin' Tablets, because their unprecedented gastrointestinal tolerance permits extension of quinidine therapy to many patients intolerant of ordinary quinidine salts.[1,5]

NOTE: Each 'Cardioquin' Tablet contains 275 mg. of quinidine polygalacturonate—equivalent to the conventional three-grain tablet of quinidine sulfate. 'Cardioquin' Tablets may be substituted one tablet for each three-grain quinidine sulfate tablet (or equivalent) previously administered. Indications and precautions: the same as for regular quinidine salts.

SUPPLIED: Uncoated, scored tablets in bottles of 50.

Consult Product Data Brochure, available on request, for complete directions, contraindications and precautions attending the use of the drug.

REFERENCES: 1. Shaftel, N., Halpern, A.: Am. J. Med. Sci. 236:184 (Aug.) 1958. 2. Sokolow, M., Edgar, A. L.: Circulation 12:576, 1950. 3. Bellet, S., Finkelstein, D., Gilmore, H.: A.M.A. Arch. Int. Med. 100:750 (Nov.) 1957. 4. Schwartz, G.: Angiology 10:115 (April) 1959. 5. Tricot, R., Nogrette, H.: Presse med 68:1085 (June 4) 1960.

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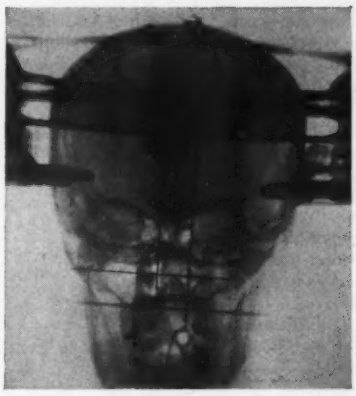

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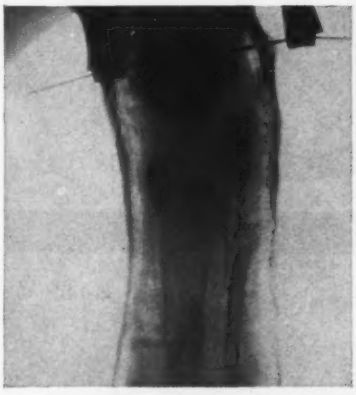

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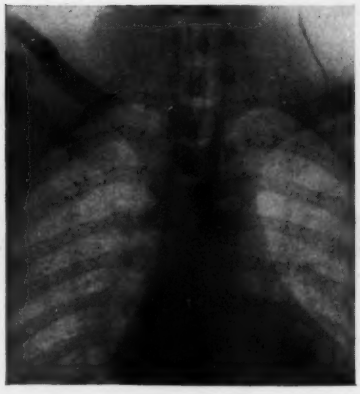

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The Journal of the American Osteopathic Association

September 1961, Volume 61, Number 1

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Supplied: 10 mg. tablets, bottles of 100; 2 cc. ampuls (5 mg./cc.) for intramuscular use, boxes of 6.

References: (1) Ratowsky, S., and Padernacht, E. D.: Relief of Primary Dysmenorrhea with Isoxsuprine, Clin. Med. *8*:512-514 (March) 1961. (2) Voulgaris, D. M.: Dysmenorrhea: Cramps or Psyche?, Scientific Exhibit, Am. Acad. G.P., Philadelphia, March 21-24, 1960.

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Bibliography *(13 clinical studies, 858 patients)*: **1.** Alexander, L. (35 patients): Chemotherapy of depression – Use of meprobamate combined with benactyzine (2-diethylaminoethyl benzilate) hydrochloride. J.A.M.A. 166:1019, March 1, 1958. **2.** Bateman, J. C. and Carlton, H. N. (50 patients): Meprobamate and benactyzine hydrochloride (Deprol) as adjunctive therapy for patients with advanced cancer. Antibiotic Med. & Clin. Therapy 6:648, Nov. 1959. **3.** Beerman, H. M. (44 patients): The treatment of depression with meprobamate and benactyzine hydrochloride. Western Med. 1:10, March 1960. **4.** Bell, J. L., Tauber, H., Santy, A. and Pulito, F. (77 patients): Treatment of depressive states in office practice. Dis. Nerv. System 20:263, June 1959. **5.** Breitner, C. (31 patients): On mental depressions. Dis. Nerv. System 20:142, (Section Two), May 1959. **6.** Gordon, P. E. (50 patients): Deprol in the treatment of depression. Dis. Nerv. System 21:215, April 1960. **7.** Landman, M. E. (50 patients): Clinical trial of a new antidepressive agent. J. M. Soc. New Jersey. In press, 1960. **8.** McClure, C. W., Papas, P. N., Speare, G. S., Palmer, E., Slattery, J. J., Konefal, S. H., Henken, B. S., Wood, C. A. and Ceresia, G. B. (128 patients): Treatment of depression – New technics and therapy. Am. Pract. & Digest Treat. 10:1525, Sept. 1959. **9.** Pennington, V. M. (135 patients): Meprobamate-benactyzine (Deprol) in the treatment of chronic brain syndrome, schizophrenia and senility. J. Am. Geriatrics Soc. 7:656, Aug. 1959. **10.** Rickels, K. and Ewing, J. H. (35 patients): Deprol in depressive conditions. Dis. Nerv. System 20:364, (Section One), Aug. 1959. **11.** Ruchwarger, A. (87 patients): Use of Deprol (meprobamate combined with benactyzine hydrochloride) in the office treatment of depression. M. Ann. District of Columbia 28:438, Aug. 1959. **12.** Settel, E. (52 patients): Treatment of depression in the elderly with a meprobamate-benactyzine hydrochloride combination. Antibiotic Med. & Clin. Therapy 7:28, Jan. 1960. **13.** Splitter, S. R. (84 patients): Treatment of the anxious patient in general practice. J. Clin. & Exper. Psychopath. In press, April-June 1960.

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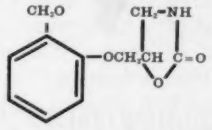

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References:
1. Graham, W.: Canad. M.A.J.: 82:1005 (May 14) 1960. 2. Vaughn, P. P.; Howell, D. S., and Kiem, I. M.: Arth. and Rheumat. 2:212, 1959. 3. O'Reilly, T. J.: J. Irish M.A. 46:106, 1960. 4. Connell, J. F., Jr., and Rousselot, L. M.: Am. J. Surg. 98:31, 1959. 5. Brodie, B. B., et al., in Contemporary Rheumatology 1956, p. 600. 6. Stein, I. D.: Ann. N.Y. Acad. Sc. 86:307 (March 30) 1960. 7. Barczyk, W., and Röth, W.: Praxis 49:589, 1960. 8. Miller, J. M., et al.: Antibiotic Med. and Clin. Therap. 7:10, 1960. 9. Connell, J. F., Jr., and Rousselot, L. M.: Am. J. Surg. 97:429, 1959. 10. Summary of individual case histories submitted to Geigy. 11. Domenjoz, R.: Ann. N.Y. Acad. Sc. 86:263, 1960. 12. Smyth, C. J.: Ann. N.Y. Acad. Sc. 86:292, 1960.

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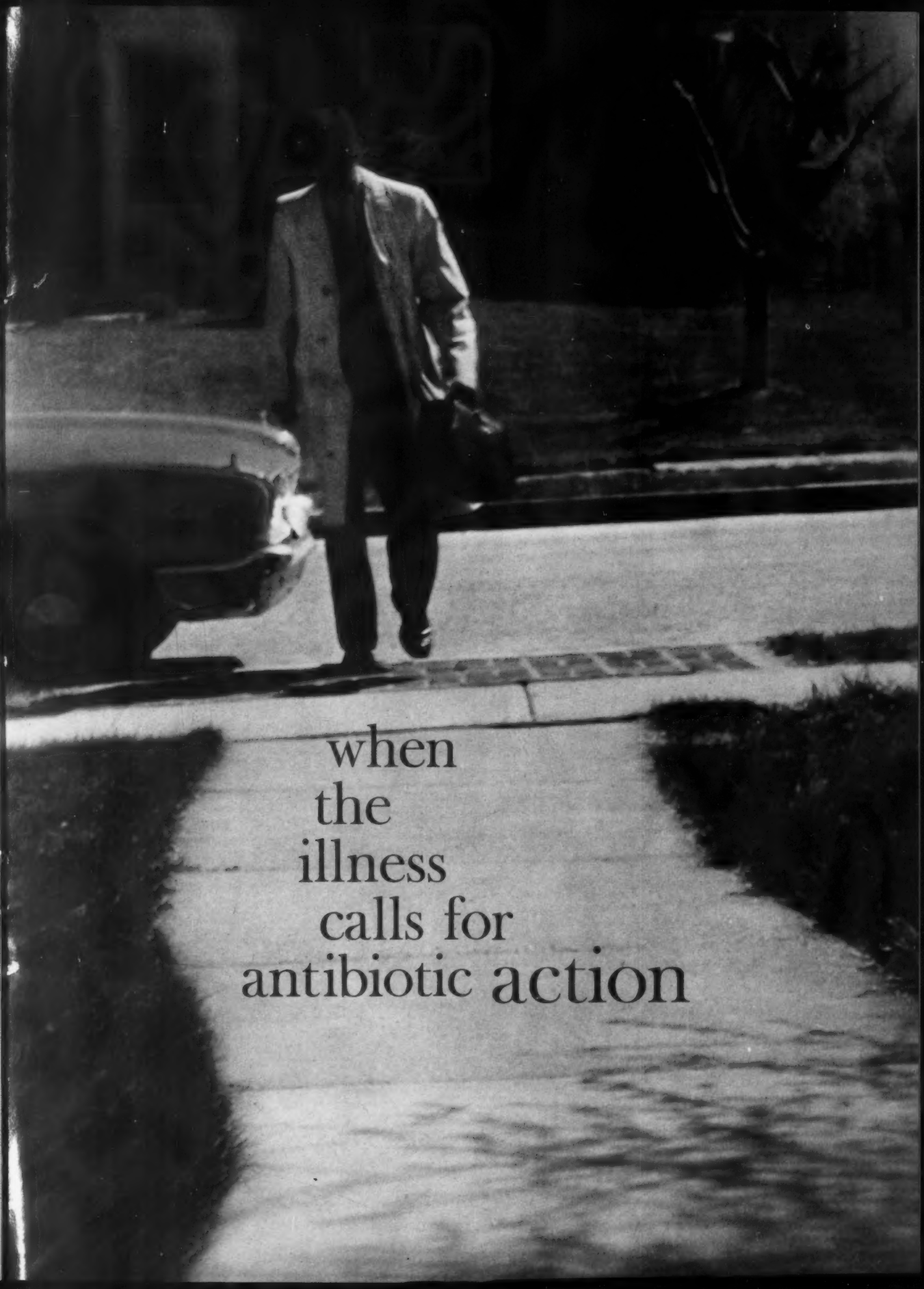
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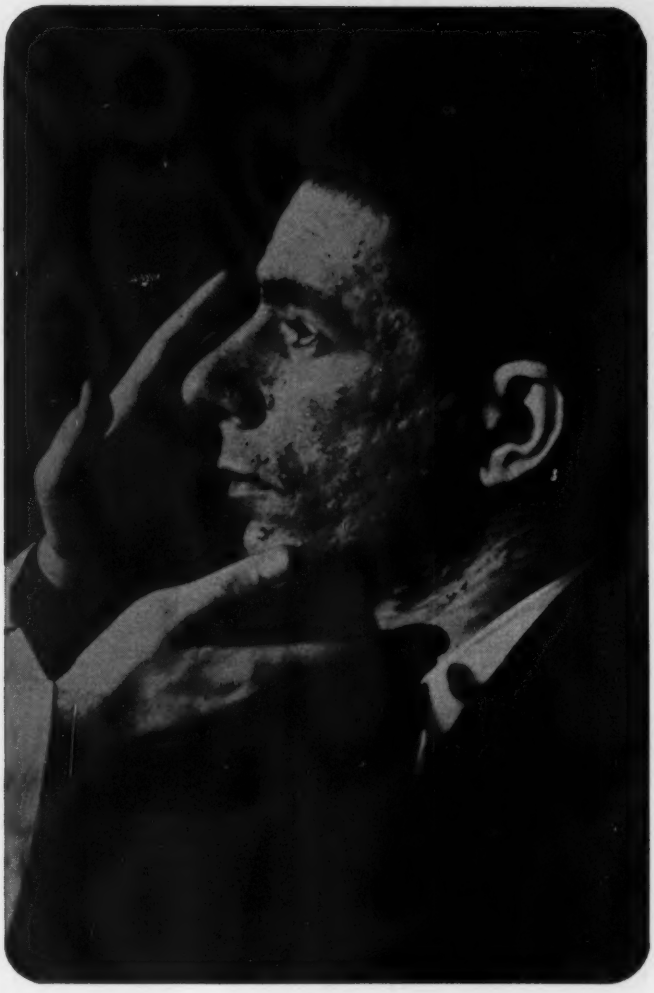
Custard flavor—150,000 units per 5 cc. teaspoonful, bottles of 2 fl. oz.

For further information on limitations, administration, and prescribing of BICILLIN, see descriptive literature or current Direction Circular. Wyeth Laboratories Philadelphia 1, Pa.



WHEN ACNE CALLS FOR ANTIBIOTIC ACTION

CYCLAMYCIN®

Triacetyloleandomycin, Wyeth

effective oral antibiotic for skin and soft tissue infections

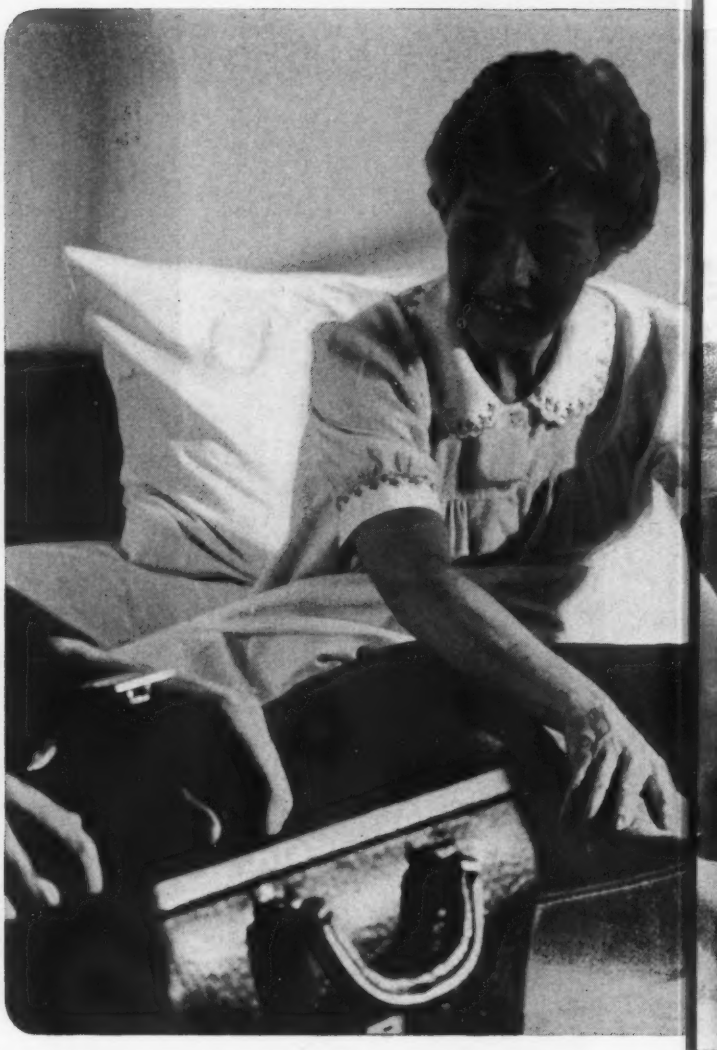
- destroys most gram-positive pathogens, including certain staphylococci resistant to other antibiotics
- reduces risk of diarrhea and gastrointestinal superinfection
- dosage flexibility provided by capsules and suspension

Oral Suspension: 125 mg. per teaspoonful, bottles of 2 fl. oz.
Capsules: 125 mg. and 250 mg., vials of 36.

For further information on limitations, administration and prescribing of CYCLAMYCIN, see descriptive literature or current Direction Circular. Wyeth Laboratories Philadelphia 1, Pa.

Wyeth®

CALL ON THIS ORAL PENICILLIN FOR PROMPT, POTENT ANTIBIOTIC ACTION



PEN·VEE® K

Liquid: Penicillin V Potassium for Oral Solution, Wyeth
Tablets: Penicillin V Potassium, Wyeth

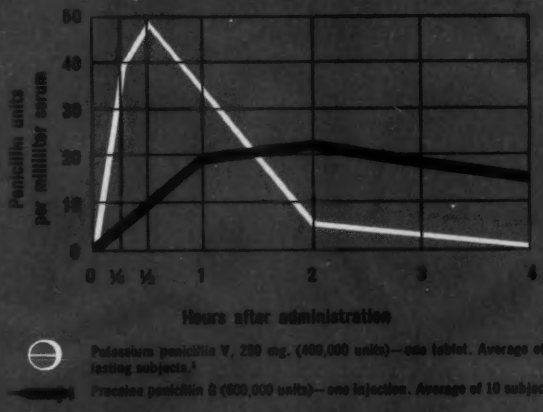
produces high penicillin blood levels

- easy-to-take Tablets or Liquid
- readily absorbed from the GI tract
- avoids pain, bother, and risk of injections
- palatable and well tolerated
- for all infections responsive to oral penicillin
- and for some usually requiring parenteral penicillin

A potent oral penicillin for high therapeutic efficacy

You can prescribe PEN•VEE K for any and all infections caused by penicillin-susceptible organisms. It is a reliable and predictable antibiotic. Demonstrable blood levels occur within 15 minutes after ingestion: peak blood levels within 30 minutes. PEN•VEE K is markedly effective for treatment and prophylaxis of common bacterial infections, including hemolytic streptococcal infections, certain staphylococcal infections, and pneumococcal and gonococcal infections.

Serum concentrations— oral and parenteral penicillin



⊖ Potassium penicillin V, 250 mg. (400,000 units)—one tablet. Average of 40 fasting subjects.[1]

Procaine penicillin G (600,000 units)—one injection. Average of 10 subjects.[2]

Palatable, convenient, well tolerated

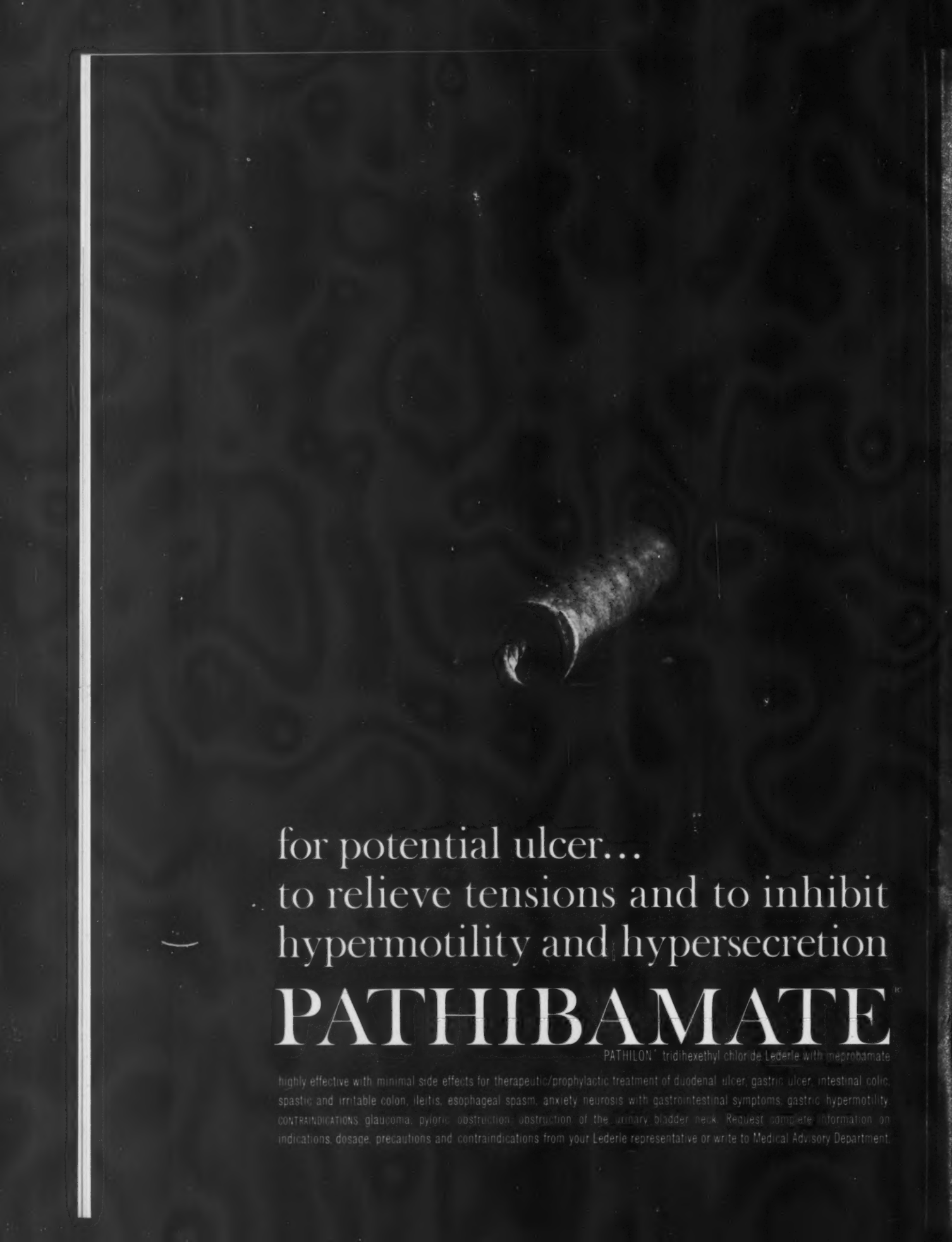
PEN•VEE K is palatable, convenient (tablet or liquid), and well tolerated. These factors encourage good patient cooperation, which helps promote rapid recovery.

References: 1. Peck, F.B., Jr., and Griffith, R.S.: Antibiotics Annual 1957-58, Medical Encyclopedia, Inc., p. 1004. 2. White, A.C., et al.: Antibiotics Annual 1955-56, Medical Encyclopedia, Inc., p. 490.

For further information on limitations, administration, and prescribing of PEN•VEE K, see descriptive literature or current Direction Circular.

Wyeth Laboratories Philadelphia 1, Pa.

Wyeth®



for potential ulcer...
to relieve tensions and to inhibit
hypermotility and hypersecretion

PATHIBAMATE®

PATHILON® tridihexethyl chloride Lederle with meprobamate

highly effective with minimal side effects for therapeutic/prophylactic treatment of duodenal ulcer, gastric ulcer, intestinal colic, spastic and irritable colon, ileitis, esophageal spasm, anxiety neurosis with gastrointestinal symptoms, gastric hypermotility. CONTRAINDICATIONS: glaucoma, pyloric obstruction, obstruction of the urinary bladder neck. Request complete information on indications, dosage, precautions and contraindications from your Lederle representative or write to Medical Advisory Department.

for patent ulcer...
to relieve tensions and to inhibit
hypermotility and hypersecretion

PATHIBAMATE

PATHIBAMATE-400 (full meprobamate effect)—1 tablet t.i.d. at mealtime and 2 tablets at bedtime. • PATHIBAMATE-200 (limited meprobamate effect)—1 or 2 tablets t.i.d. at mealtime and 2 tablets at bedtime. • Adjust to patient response. Each Pathibamate-200 tablet contains PATHILON, 25 mg.; meprobamate, 200 mg. Pathibamate-400 tablets contain 400 mg. meprobamate.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

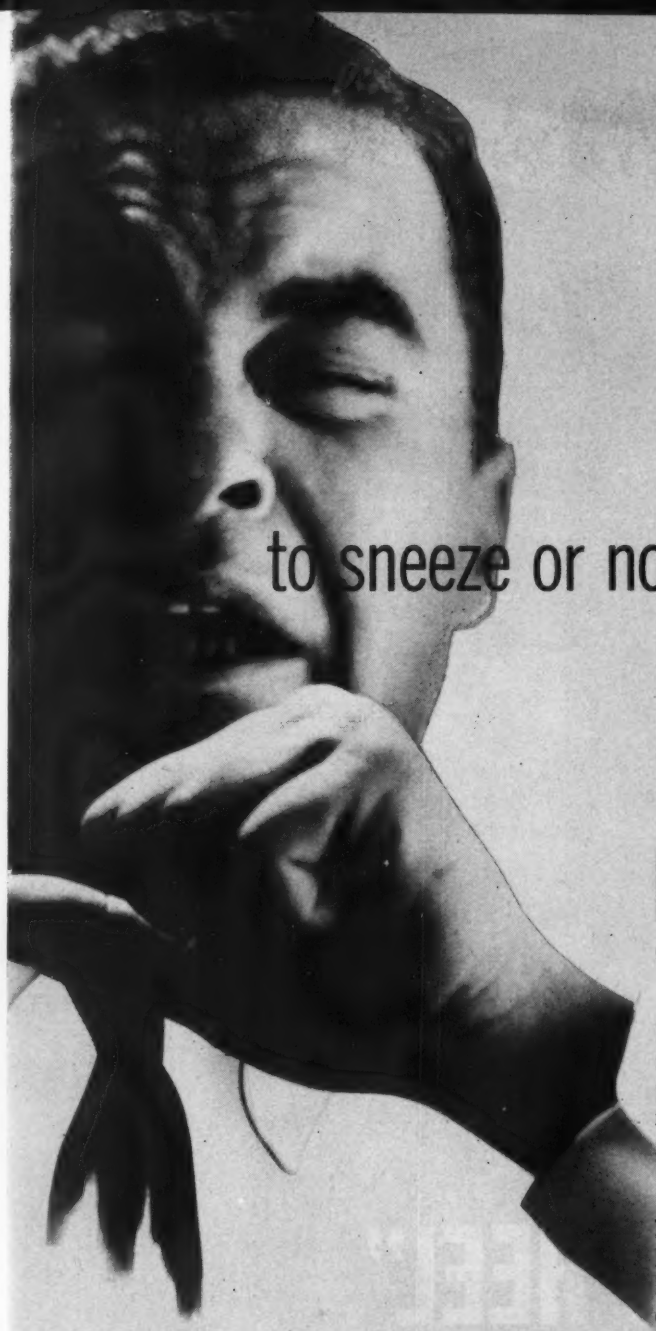
"from Contented Cows"

THE DOCTOR PRESCRIBES *the dilution and carbohydrate adjustment for each baby's needs, with Carnation–the flexible formula milk.*

THE DOCTOR DECIDES *the proper time and amounts of iron, Vitamin C and other supplementation for each individual.*

THE BABY THRIVES *–as babies have for generations on natural cow's milk in its soft-curd form, with protein and other nutrients at levels proven adequate by 30 years of successful feeding with the Carnation Evaporated Milk formula.*

Ready-prepared, for convenience. Carnalac is Carnation Evaporated Milk with its added Vitamin D, plus carbohydrate. The mother just adds water. Diluted 1:1, Carnalac provides 2.8% protein, 7.1% carbohydrate, 3.2% fat, 400 I.U. Vitamin D per reconstituted quart, 20 calories per fluid ounce.



Schering

to sneeze or not to sneeze...

in hay fever, there is no question

POLARAMINE

rapid relief of sneezing, tearing, associated symptoms

POLARAMINE provides unexcelled antihistaminic effectiveness with minimal dosage for your patients with hay fever. Rapid, effective relief of sneezing, tearing, rhinorrhea, itching and other symptoms helps your patients to "breathe easy" again . . . permits them to enjoy their environment. Patients feel better instead of "dragged out" because sleepless nights are no longer a problem. With POLARAMINE, your patients can work, read, engage in sports and other activities without being hampered by the distressing symptoms of hay fever.

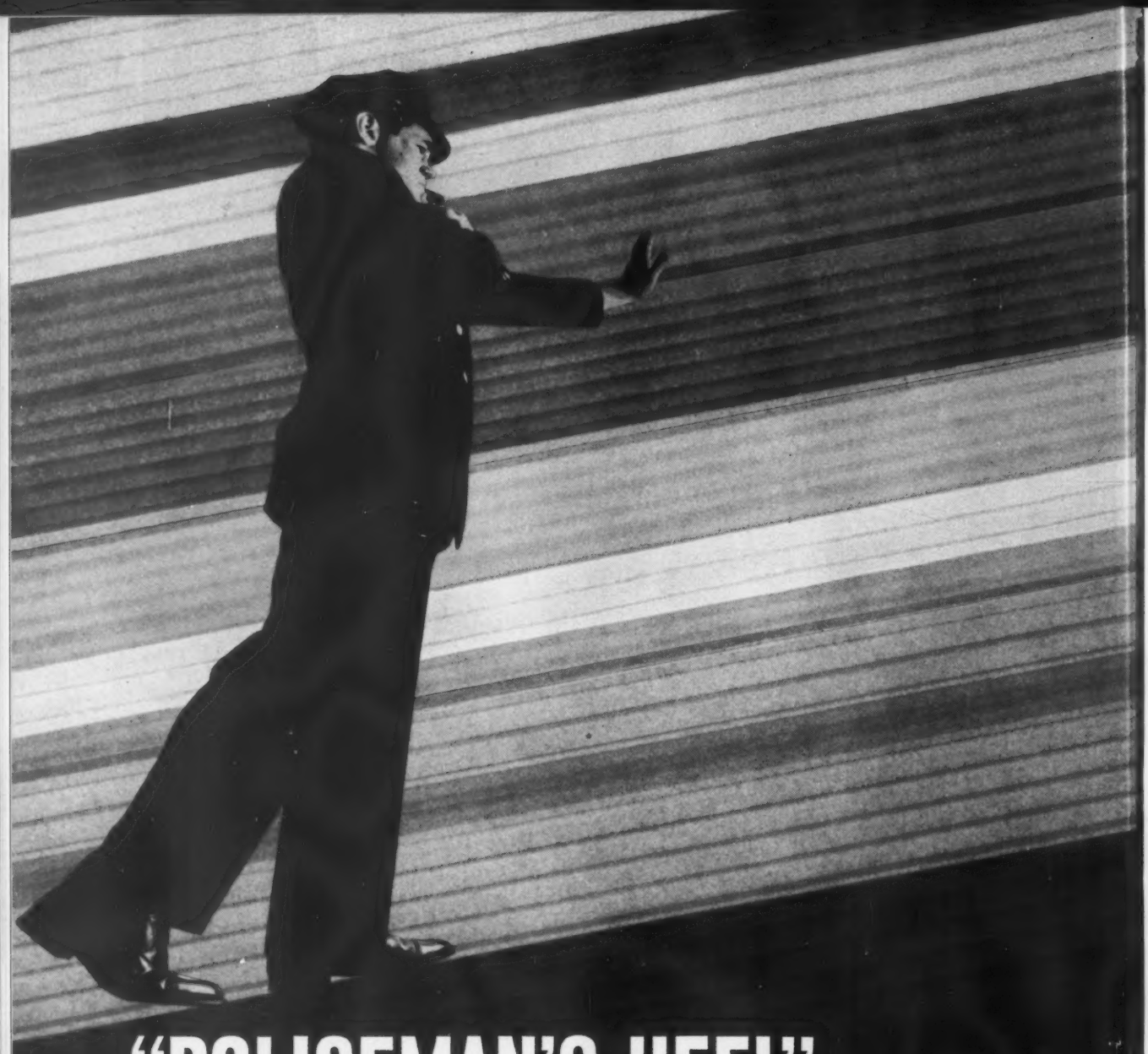
For daylong or nightlong control, POLARAMINE REPETABS,® 4 and 6 mg., afford prolonged relief, eliminate repeated taking of medication.

Also available as Tablets, 2 mg., and Syrup, 2 mg./5 cc.

For complete details, consult latest Schering Literature available from your Schering Representative or Medical Services Department, Schering Corporation, Bloomfield, New Jersey.

POLARAMINE® Maleate, brand of dexchlorpheniramine maleate.

4242



"POLICEMAN'S HEEL"

...and other painful or disabling musculoskeletal conditions often respond rapidly to the "antidoloritic"* effects of DECAGESIC. DECAGESIC helps restore normal function by relieving pain and discomfort, suppressing inflammation... and often adding a sense of well-being and renewed strength. DECAGESIC combines the benefits of DECADRON® and aspirin with aluminum hydroxide to provide increased efficacy with a lower incidence of side effects.

Decagesic®

dexamethasone with aspirin and aluminum hydroxide

FOR CONSERVATIVE MANAGEMENT OF MUSCULOSKELETAL SYNDROMES

Indications: Mild to moderate inflammatory, rheumatic, and musculoskeletal disorders, and conditions in which the conjunctive use of steroid and salicylate is indicated.

Dosage: 1 or 2 tablets 3 or 4 times daily. The usual precautions of corticosteroid therapy should be observed. Before prescribing or administering DECAGESIC, the physician should consult the detailed information on use accompanying the package or available on request.

Supplied: Bottles of 100. Each tablet contains 0.25 mg. of DECADRON dexamethasone, 500 mg. of aspirin (acetylsalicylic acid) and 75 mg. of aluminum hydroxide (present as the dried gel).

*The term "antidoloritic" has been coined by Merck Sharp & Dohme to describe an agent designed to allay pain associated with inflammation—dolor = pain, itic = associated with inflammation.

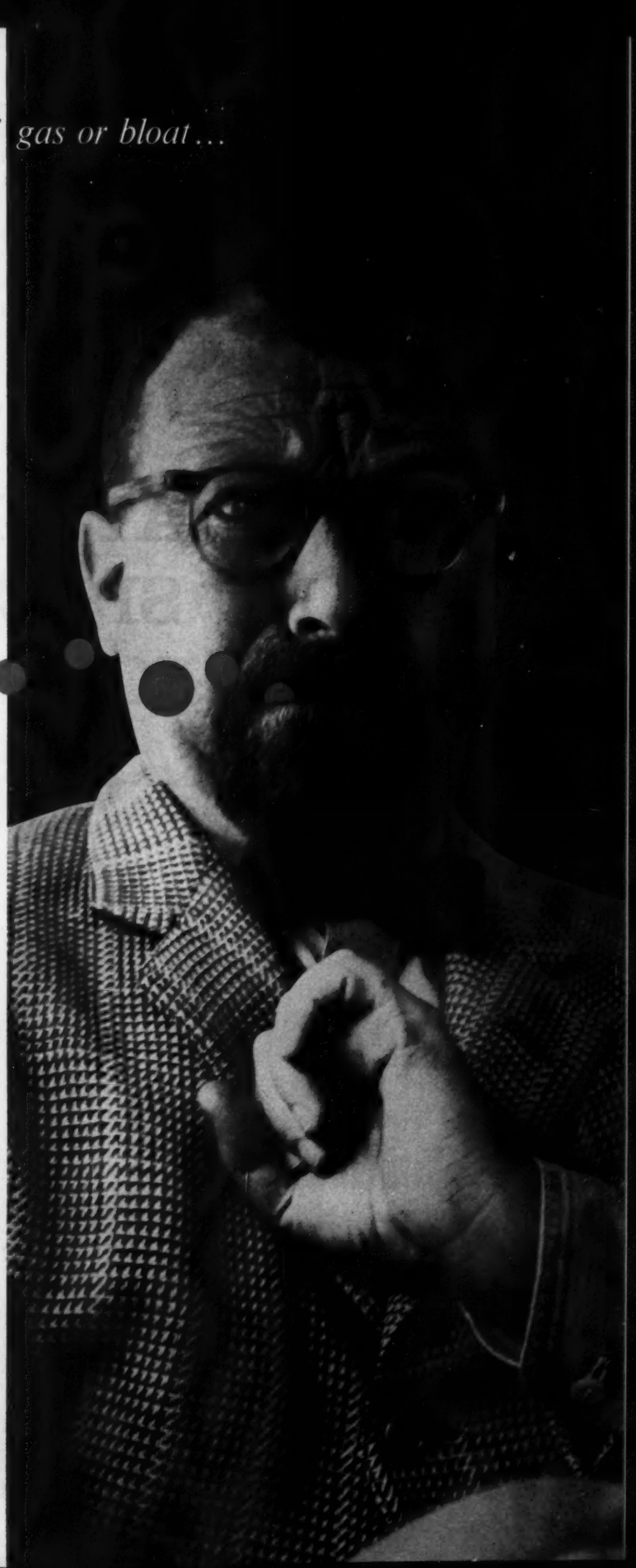
DECAGESIC and DECADRON are trademarks of Merck & Co., Inc.

MERCK SHARP & DOHME • Division of Merck & Co., INC., West Point, Pa.

when patients complain of gas or bloat...

new

MYLICON®



MYLICON relieves the gastrointestinal distress produced by entrapped gas. MYLICON's defoaming action changes the surface tension of gas bubbles, permitting them to coalesce. This gas is released and eliminated by belching or passing flatus. MYLICON is physiologically inert, nontoxic.

Gas entrapment and distention can result from Spastic Colitis, Aerophagia, Postoperative Gas, Postgastrectomy Syndrome, Hyperacidity, Hiatus Hernia, Diverticulitis, Gastric and Duodenal Ulcers.

Pleasant tasting, soft chewable tablets can be taken without water.

One white scored tablet contains:
Methylpolysiloxane, a silicone.....40 mg.

DOSAGE: one tablet after each meal and at bedtime.

SUPPLIED: bottles of 100 and 500 tablets at all pharmacies.

References: "Intestinal Gas and Bloating; Treatment with Methylpolysiloxane," Am. Pract. & Dig. of Treat., 11:52. (Jan.) 1960.

"Use of Silicone in the Treatment of Intestinal Gas and Bloating," J.A.M.A., 174:2052, (Dec. 17) 1960.

also *NEW* **MYLICON® DROPS** for infant colic caused by excessive air swallowing or inability to belch or pass flatus.

MYLICON DROPS (0.3 cc. to 0.6 cc.) can be given directly from the dropper or added to each feeding.

Each 0.6 cc. represents 40 mg. of methylpolysiloxane, equivalent to one MYLICON tablet.

Available at all pharmacies in bottles of 30 cc. of drops.

Stuart

THE STUART COMPANY
PASADENA, CALIFORNIA

11881/4100

WHAT'S NEW AND SPECIFIC FOR NIGHT CRAMPS

INCREASES AND MAINTAINS BLOOD FLOW FOR 10-12 HOURS

"UNUSUALLY GOOD"[1] VASODILATION Roniacol Timespan produced significant or complete relief of night cramps in a majority of patients.[2] Action: specific dilation of peripheral vessels.[2] Result: Roniacol increases blood flow to ischemic extremities.[3-5]

ONE DOSE EFFECTIVE ALL NIGHT New, sustained-release Roniacol Timespan brings convenience and protection to your patients with night cramps—precludes interrupted sleep by providing nightlong prophylaxis with a single evening dose.

NEGLIGIBLE SIDE EFFECTS Unlike sympathetic blocking agents, Roniacol is selective—produces no cardiac stimulation, no hypotension, no gastrointestinal stimulation[6,7]—may be used safely in the presence of gastritis, peptic ulcer or coronary disease. Of 264 patients on Roniacol Timespan, only thirteen experienced side effects—none of them major.[2]

RONIACOL TIMESPAN tablets are recommended for convenience of therapy in conditions associated with deficient circulation; e.g., peripheral vascular disease, including generalized arteriosclerosis, cerebral arteriosclerosis, varicose ulcers, decubital ulcers, chilblains, diabetic endarteritis, Meniere's syndrome and vertigo due to impaired cerebral circulation.

DOSAGE: One or two Roniacol Timespan tablets in the morning and at night.

SUPPLY: Tablets of 150 mg, bottles of 50. When prolonged effects are not desired, prescribe Roniacol Tartrate Tablets, 50 mg, or Roniacol Elixir, 50 mg per teaspoonful (5 cc).

REFERENCES: 1. R. E. Sumner, Personal Communication. 2. Reports on File, Roche Laboratories. 3. E. C. Texter, et al., **Am. J. M. Sc.**, **224**:408, 1952. 4. M. M. Fisher and H. E. Tebrock, **New York J. Med.**, **53**:65, 1953. 5. I. H. Richter, et al., **New York J. Med.**, **51**:1303, 1951. 6. C. M. Castro and L. De Soldati, **Angiology**, **4**:165, 1953. 7. R. M. N. Crosby, **Am. J. M. Sc.**, **225**:61, 1953. 8. J. Dosdos and G. E. Arnold, **Eye Ear Nose & Throat Month.**, **38**:1035, 1959.

Roniacol®—brand of nicotinyl alcohol. Timespan®

ROCHE **ROCHE** LABORATORIES • Division of Hoffmann-La Roche Inc • Nutley 10, N. J.

RONIACOL TIMESPAN

TABLETS

SAFE, SPECIFIC PERIPHERAL VASODILATOR IN THE NEW SUSTAINED-RELEASE FORM

news from Syntex about topical steroid therapy...

New Synalar Cream speeds remission of many dermatoses when other topical—sometimes even systemic—steroids fail

Realizing the problem posed by intractable dermatoses in almost every practice, Syntex would like to invite your attention to new Synalar Cream. Clinical evidence points to its effectiveness in many refractory cases.

pitfalls avoided One of the most revealing studies on Synalar was designed by Dr. Jud R. Scholtz, who selected mostly patients with resistant dermatological lesions. For this study there were two basic criteria: 1) Only patients who had failed to respond to previous therapy were accepted for study. 2) Only complete clearing of lesions was judged "effective." Most patients suffered from lesions which had been present for months (or even years) and had proved resistant to topical steroid therapy. Some had failed to respond even to *systemic* steroid therapy.

These patients were divided into three groups: 1) Patients with multiple lesions had certain areas treated with Synalar, other lesions treated with older standard corticoids. 2) Patients with single chronic lesions (unresponsive to previous local and systemic therapy) were given Synalar alone. 3) Some patients with multiple lesions were given Synalar and treated concurrently with some other *non-corticoid* therapy in comparable lesions.

results Despite these rigorous criteria, results were impressive: effective in 80 per cent of eczematous dermatitis, superior to previously available agents in 32 out of 45. The author concluded: "This compound [Synalar] appears to produce results with topical application comparable to what can be produced with systemic corticoid therapy."[1] Nor are these isolated results. Analysis of 347 cases reported to the Syntex medical department gives convincing evidence that Synalar Cream is clinically superior.[2]

exclusive base Synalar, 40 times as potent topically as hydrocortisone, employs a specially formulated hydrophilic base. This water-washable cream is odorless, non-staining and cosmetically acceptable to the most particular patient. It has proved non-sensitizing in insult patch tests on 200 patients. Synalar Cream smooths on quickly and easily over inflamed lesions in sparing amounts.

your evaluation But even these very favorable reports cannot take the place of your own experience. To assist you in making your own evaluation of Synalar, here is a suggestion:

1. Select three of your most stubborn cases of dermatoses—cases refractory to previous topical steroid therapy or hitherto responsive only to more difficult-to-manage systemic steroid administration. (See indications.)
2. Treat them with new Synalar Cream for two weeks. (A complimentary starter dose for three patients is available on request.)
3. Judge the results.

objective proposal Here is how current clinical experience with Synalar is summarized: **New Synalar Cream speeds remission of dermatoses when other topical—sometimes even systemic—steroids have failed.** However, only your own experience will confirm this. That's why Syntex makes this proposal: use Synalar on your resistant cases... test your results against the reported evidence.

STILL AVAILABLE: Reprints of our concise review series.

Syntex Laboratories, Inc.
10 East 40th Street
New York 16, N. Y.

References: 1. Scholtz, Jud R.: Paper presented at California Medical Association, April 30, 1961. 2. Product brochure available on request.

Indications: Synalar Cream is indicated in atopic dermatitis, neurodermatitis, contact dermatitis, seborrheic dermatitis, eczematous dermatitis, pruritus ani, lichen simplex, post-anal surgery, nummular eczema, stasis dermatitis, intertrigo, exfoliative dermatitis, and in certain superficial lesions of psoriasis.

Dosage and Administration: Synalar (0.025%) Cream is for topical use only. A small amount should be applied lightly to the affected skin area two or three times daily, as needed. The cream should be massaged gently and thoroughly until it disappears. Since Synalar is in a water-washable, vanishing cream base, it is easily applied and leaves no traces. Synalar may be used over long periods of time in specific conditions when deemed necessary.

Precautions: Synalar Cream is virtually non-sensitizing and non-irritating, but patients should be observed for development of idiosyncrasies or the spreading of infection.

In some instances of dermatoses, where an emollient effect is desired, such as in atopic dermatitis, dilution of the cream with equal parts of hydrogenated vegetable oil or petrolatum makes the cream more acceptable and effective.

Chemical Formula: 0.025% fluocinolone acetonide, Syntex (6α, 9α-difluoro-16α-hydroxyprednisolone-16,17-acetonide) in a water-washable, aqueous base.

How Supplied: Synalar (0.025%) Cream is supplied in 15 Gm. collapsible tubes. Available on prescription only.

synalar® cream 15 Gm.
0.025% fluocinolone acetonide, Syntex

an original steroid from

SYNTEX

61 GP-3A

CONTROL BACTERIURIA —WITHOUT PRODUCING RESISTANT MUTANTS

Control bacteriuria and help reduce the risk of pyelonephritis with the urine-specific, bactericidal action of Mandelamine. Mandelamine destroys most urinary pathogens, including many strains resistant to other antibacterials. Mandelamine produces no resistant mutants...is repeatedly effective for recurring infections in the same patient. Prescribe Mandelamine for bacteriuria, symptomatic or asymptomatic . . . and especially when there is a history of recurring lower urinary tract infections.

Dosage: Adults—Two Mandelamine Hafgrams four times a day. **Precautions:** Mandelamine is contraindicated in patients with renal insufficiency and/or severe hepatitis. An occasional patient may experience gastrointestinal disturbance. **Supplied:** Mandelamine Hafgram® Tablets (0.5 Gm.), and pleasantly flavored Mandelamine Suspension. Mandelamine Sensi-Discs are available from Laboratory Supply Houses. Full dosage information, available on request, should be consulted before initiating therapy.

MANDELAMINE®

brand of methenamine mandelate

a urine-specific antibacterial

makers of

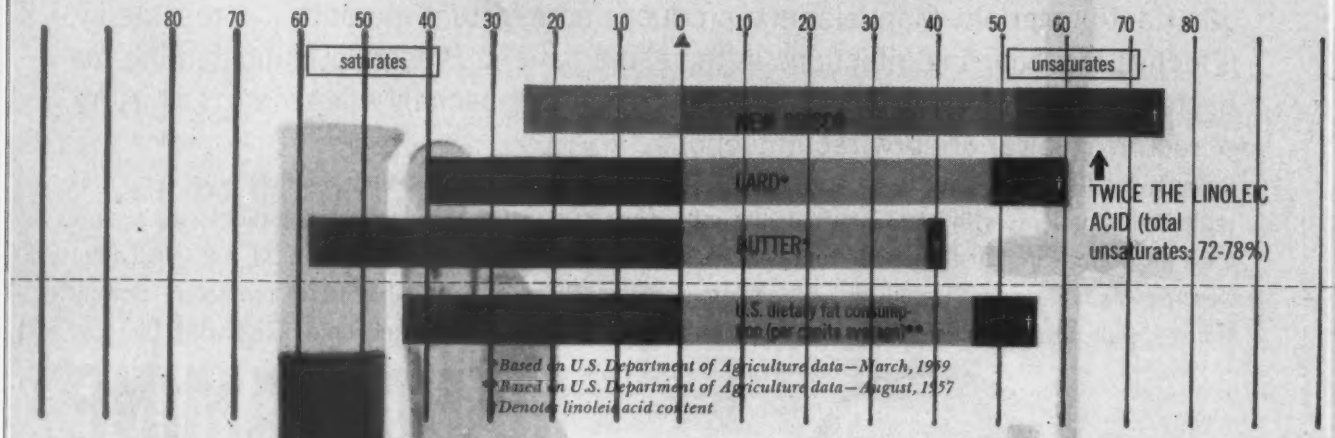
FEDRAL DELURIL PROLOID PERITRATE

WARNER CHILCOTT

MORRIS PLAINS, N.J.

6P17A

Compare NEW CRISCO'S improved level of preferred lipid factors


80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80
saturates
unsaturates
NEW CRISCO
LARD*
BUTTER*
U.S. dietary fat consumption (per capita average)**
TWICE THE LINOLEIC ACID (total unsaturates: 72-78%)

*Based on U.S. Department of Agriculture data—March, 1959
**Based on U.S. Department of Agriculture data—August, 1957
†Denotes linoleic acid content

Your wife can tell you why real shortening is needed for good cooking...

NEW CRISCO®

THE HIGHLY UNSATURATED SHORTENING

doubles the linoleic acid to answer the need for an all-purpose shortening in line with changing views on dietary fat

You, as a physician, know the desirability of adequate sources of linoleic acid even in normal diets. Your wife knows how important shortening is in preparing fine-tasting foods.

Today's prudent diets dictate a more balanced intake of preferred unsaturates—even though a direct causal relationship between dietary fats, serum lipid levels, and cardiovascular diseases is not yet proved.

Helps you prescribe diets patients will follow!

Your patients know the desirability of *real* shortening for all frying and baking because of the wonderful eating characteristics it alone gives to many foods. In fact many of our favorite foods, for example most cakes, cookies, and pastry, can *only* be satisfactorily made with a real shortening, not salad oil. And you know how difficult it is to give up favorite foods—even on doctor's orders.

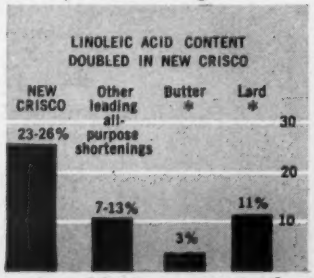
The importance of new Crisco

Hence the importance to you and your patients of new, improved Crisco: A highly unsaturated *vegetable* shortening, new Crisco now provides approximately double the linoleic acid (23-26 per cent) of other leading all-purpose shortenings—and a total of 72-78 per cent unsaturates. In one-half cup of new Crisco there are actually 22 grams of linoleic acid.

For you, this technical achievement means relief from worry about shortenings when patients ask your advice about what are the preferred fats to use. For these patients, use of highly unsaturated new Crisco will permit enjoyment of the advantages of the finest vegetable shortening—yet it also permits them to be on the preferred side dietetically.

Can be recommended with confidence

New Crisco achieves a more favorable level of preferred unsaturates in line with current fat concepts and can be recommended with confidence. Crisco's outstanding *digestibility, performance, appearance,* and *all-purpose versatility* are unchanged.



NEW CRISCO Fatty Acid Composition (Grams/100 Grams)	
Total Unsaturates	72-78
Polyunsaturates	
Linoleic	23-26
Others	4-5
Mono-unsaturates	44-50
Total Saturates	22-28
Natural Tocopherols	0.1
Cholesterol	None
Salt (Sodium Chloride)	None

As a highly unsaturated vegetable shortening, with double the linoleic acid content, new Crisco is designed to satisfy not only the needs of the good cook but also the new requirements of the nutrition scientist and physician.

PROCTER & GAMBLE · CINCINNATI, OHIO

CYCLEX®

HYDRODIURIL® WITH MEPROBAMATE
HYDROCHLOROTHIAZIDE

to relieve the symptoms of premenstrual tension

for EDEMA... CYCLEX provides the prompt diuresis of HYDRODIURIL for rapid reduction of weight gain, breast fullness, abdominal congestion

for MOOD-CHANGES... CYCLEX supplies the effective relief of meprobamate for nervousness, irritability, tension, nausea, malaise, insomnia

for GI DISTRESS... CYCLEX affords quick-acting relief of nausea and bloating associated with premenstrual tension

SUPPLIED: Tablets, bottles of 100. Each tablet contains 25 mg. of HYDRODIURIL (hydrochlorothiazide) and 200 mg. of meprobamate.

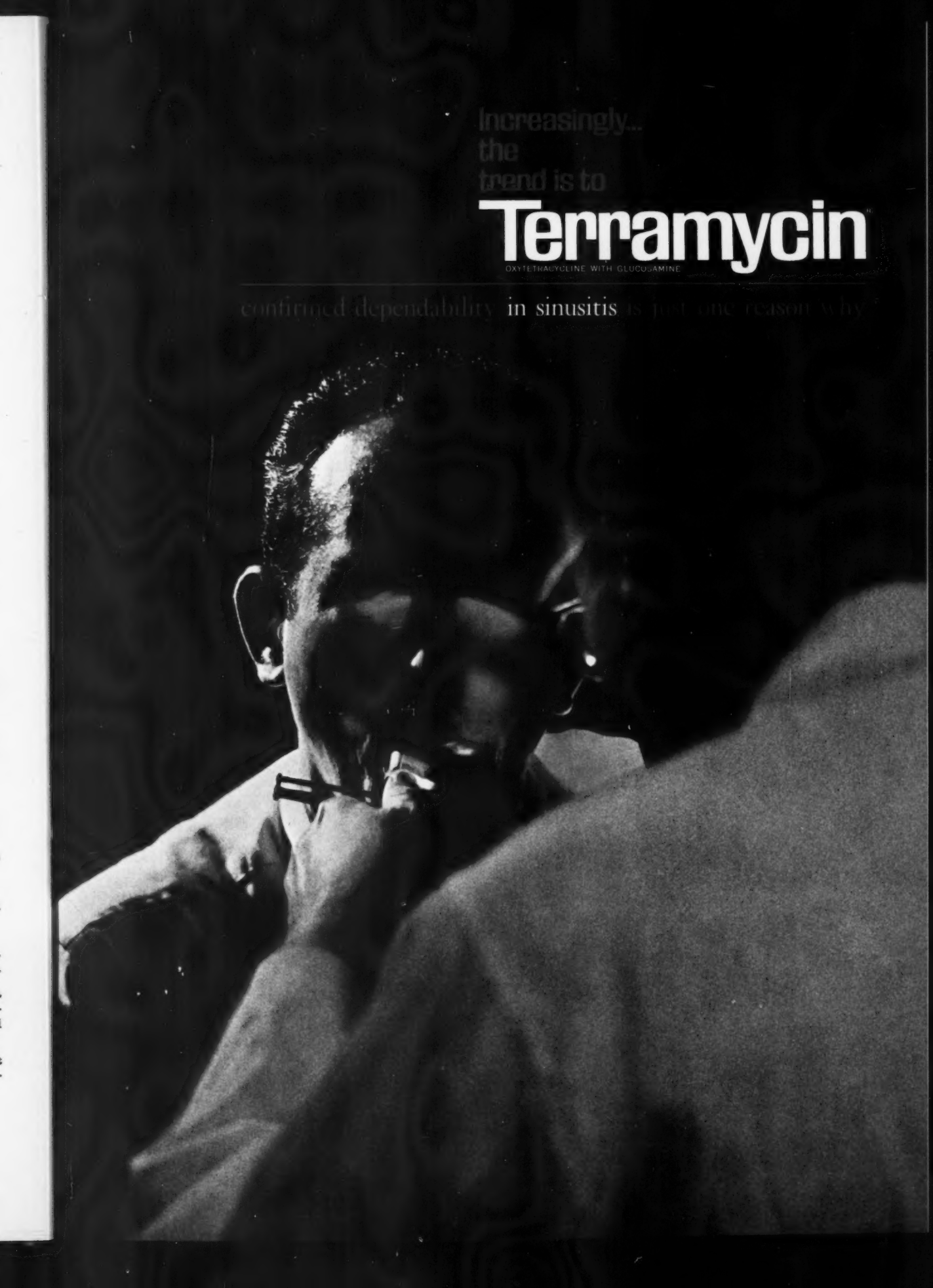
DOSAGE: Usual adult dosage is one tablet once or twice a day, beginning on the first morning of symptoms and continuing until the onset of menses. CYCLEX may be continued through the menstrual period.

Before prescribing or administering CYCLEX, the physician should consult detailed information on use accompanying package or available on request.

CYCLEX and HYDRODIURIL are trademarks of Merck & Co., Inc.

MSD

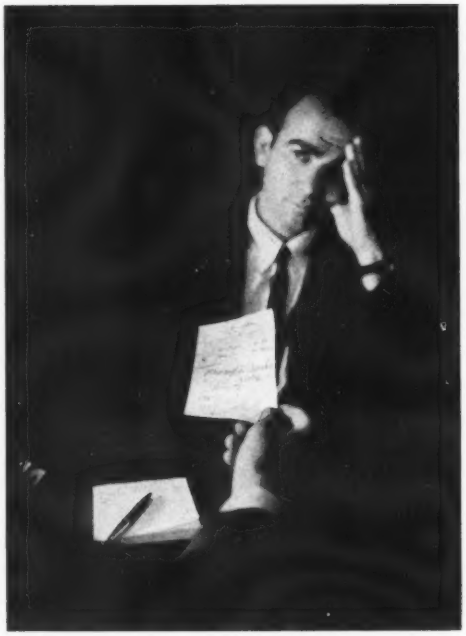
MERCK SHARP & DOHME
Division of Merck & Co., Inc.
West Point, Pa.


Increasingly...
the
trend is to
Terramycin
OXYTETRACYCLINE WITH GLUCOSAMINE
confirmed dependability in sinusitis is just one reason why

According to a recent report* on the effectiveness of Terramycin in 106 cases of upper respiratory tract infection: "The response in sinusitis was particularly gratifying, as both acute and chronic cases were controlled within an average of five days."

"It was the impression of the hospital staff that oxytetracycline [Terramycin] was not only better tolerated, but more effective than other antibiotics habitually used."

The results reported in this and many other studies confirm the vitality of Terramycin for broad-spectrum antibiotic therapy and demonstrate why —increasingly—the trend is to Terramycin.



In brief

The dependability of Terramycin in daily practice is based on its broad range of antimicrobial effectiveness, excellent toleration, and low order of toxicity. As with other broad-spectrum antibiotics, overgrowth of nonsusceptible organisms may develop. If this occurs, discontinue the medication and institute appropriate specific therapy as indicated by susceptibility testing. Glossitis and allergic reactions to Terramycin are rare. Aluminum hydroxide gel may decrease antibiotic absorption and is contraindicated.

More detailed professional information available on request.

another reason why the trend is to Terramycin—*versatility of dosage form:*

TERRAMYCIN Syrup/Pediatric Drops
125 mg. per tsp. and 5 mg. per drop (100 mg./cc.), respectively—deliciously fruit-flavored aqueous forms . . . preconstituted for ready oral administration

TERRAMYCIN Intramuscular Solution
50 mg./cc. in 10 cc. vials; 100 mg. and 250 mg. in 2 cc. ampules—the broad-spectrum antibiotic for immediate intramuscular injection . . . conveniently preconstituted . . . notably well tolerated at injection site with low tissue reaction compared to other broad-spectrum antibiotics

Terramycin®

OXYTETRACYCLINE WITH GLUCOSAMINE

CAPSULES *250 mg. and 125 mg. per capsule*

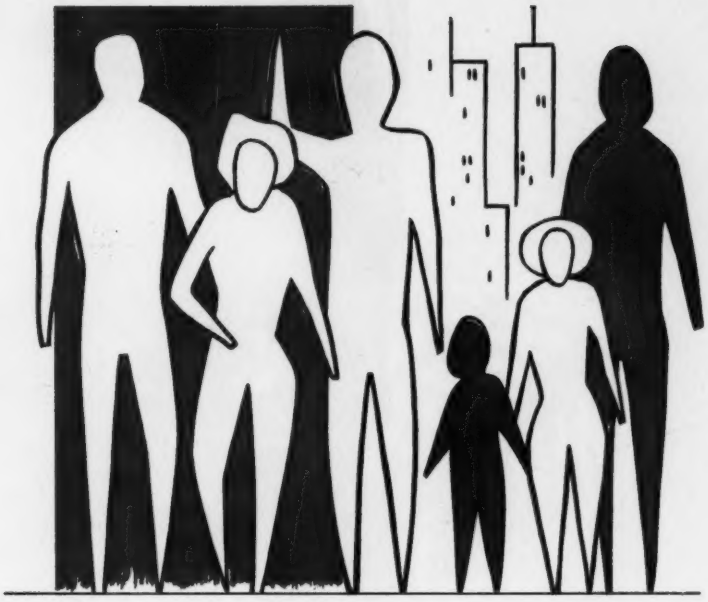
convenient initial or maintenance therapy in adults and older children

Science for the world's well-being® Pfizer

PFIZER LABORATORIES Division, Chas. Pfizer & Co., Inc.
New York 17, N. Y.

*Jacques, A. A., and Fuchs, V. H.: J. Louisiana M. Soc. 113:200, May, 1961.

Help your patients and business associates discover HEALTH



They will:

- obtain valuable information on guarding their health
- learn of the contributions made by the osteopathic profession to the healing arts
- be informed of the advances medicine is making in the fight against disease
- receive guidance for healthier and happier living from childhood, through adolescence and adulthood, to old age.

Make HEALTH available in your waiting room or mail it directly to your lay public. It will cost you only 10c a copy, $1.00 for each one-year subscription, and $2.50 for each three-year subscription.

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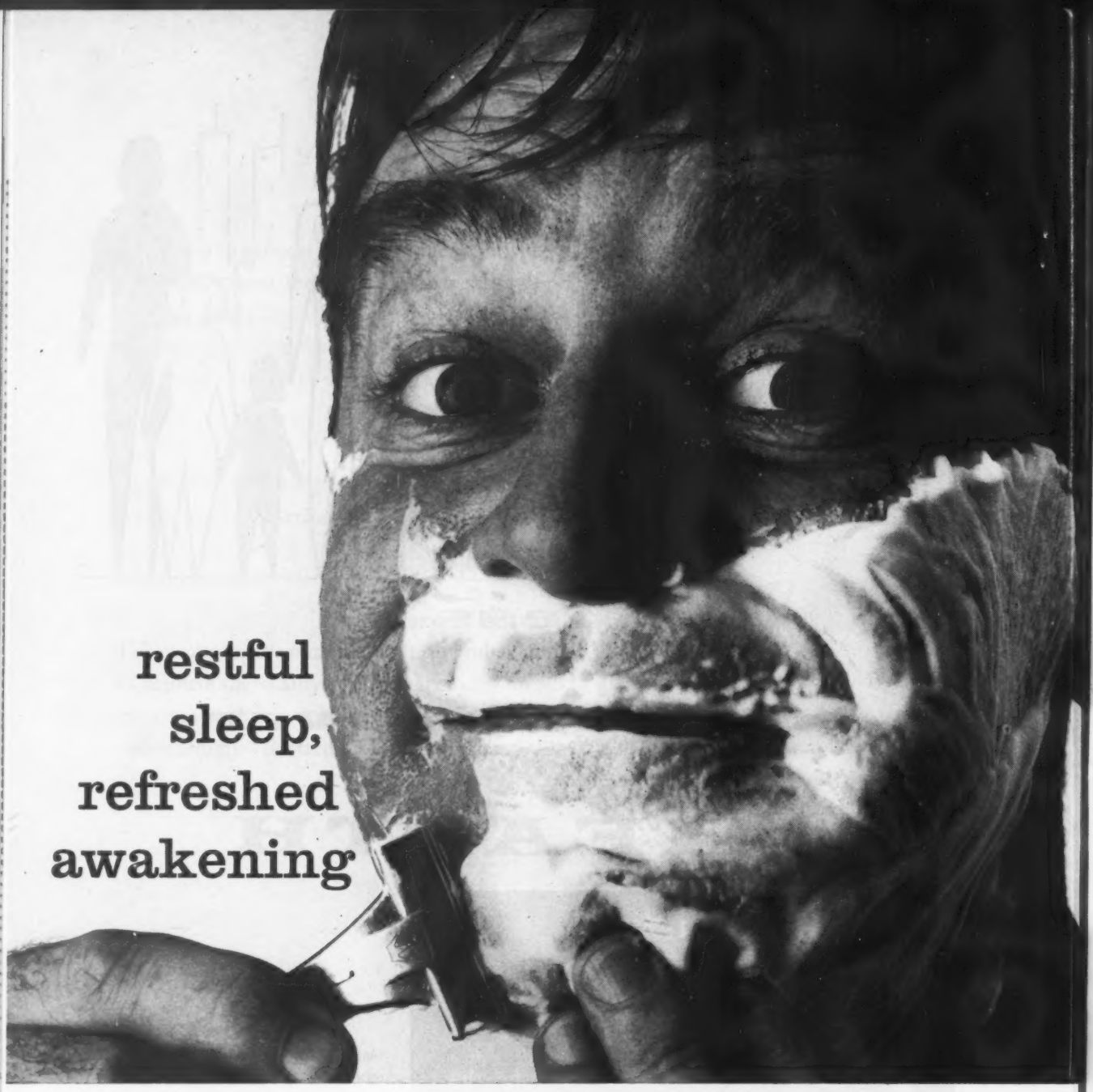
212 E. Ohio St., Chicago 11, Illinois



After a night of deep, refreshing sleep—this is the promise of Noludar 300. One capsule at bedtime acts quickly...eases your patient into sleep without pre-excitement, gives up to 6 or 8 hours of undisturbed sleep without risk of habituation, without toxicity or even minor side effects. Try Noludar 300 for your next patient with a sleep problem. Chances are he'll tell you

"I slept like a log"

NOLUDAR® 300

brand of methyprylon

300-mg capsules

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specify Bufferin® and avoid salicylate intolerance

Gastric distress due to aspirin used alone has been frequently reported.[1-6]

BUFFERIN is superior to plain aspirin in that it does not cause gastric intolerance; it is "... the drug of choice where prolonged, high salicylate levels are indicated."[7]

"... is 4 to 5 times better tolerated than ordinary aspirin."[7]

And BUFFERIN tablets go into solution faster than plain aspirin,[8] absorption being further expedited by the antacid components.[9]

1. Muir, A., and Cossar: I. A., Brit. M. J. *2*:7-12 (July 2) 1955. 2. Waterson, A. P.: Brit. M. J. *2*:1531 (Dec. 24) 1955. 3. Brown, R. K., and Mitchell, N.: Gastroenterology *31*:198-203 (Aug.) 1956. 4. Kelly, J. J., Jr.: Am. J. Med. Sci. *232*:119-128 (Aug.) 1956. 5. Brick, I. B.: J. Am. Med. Assn. *163*:1217-1219 (April 6) 1957. 6. Lange, H. F.: Gastroenterology *33*:770-777 and 778-788 (Nov.) 1957. 7. Tebrock, H. E.: Ind. Med. & Surg. *20*:480-482, 1951. 8. Levy, G., Hayes, B. A.: N. Eng. J. Med. *262*:1056 (May 26) 1960. 9. Sleight, P.: The Lancet, p. 305 (Feb. 6) 1960 and p. 932 (April 23) 1960.

For a complimentary supply of BUFFERIN write:
Bristol-Myers Company, Dept. BU-13, 630 Fifth Avenue, New York 20, New York

Today's little "limey" needs a half barrel of orange juice

...or, to be exact, a total of 2,106 ounces in his first two years. And how much he'll need during his first twenty years would have to be measured by the truckload, because the need for the nutrients contained in Florida orange juice continues throughout life.

How our little "limey" or any of your other patients obtain the vitamins and nutrients found in citrus fruits is important to them and to you. There are so many wrong ways, so many substitutes and imitations for the real thing.

For a way that combines real nutrition with real pleasure, there's nothing better than the oranges and grapefruit ripened under Florida's own sunshine. Somehow, nothing can surpass the result of the combination of sun, air, temperature, and soil found in Florida.

It's good nutrition to encourage people to drink orange juice. It's even more judicious to encourage them to drink the juices and eat the fruits watched over by the Florida Citrus Commission. These men set the world's highest standards of quality in fresh, frozen, canned, or cartoned citrus fruits and juices.

When you suggest to your patients that they have a big glass of orange juice for breakfast, or for a snack, or when they want to raid the refrigerator, the deliciousness of Florida orange juice will give you assurance that they'll *want* to carry out your recommendation. You'll be helping them to the finest drink there is—by the glassful or the barrel.

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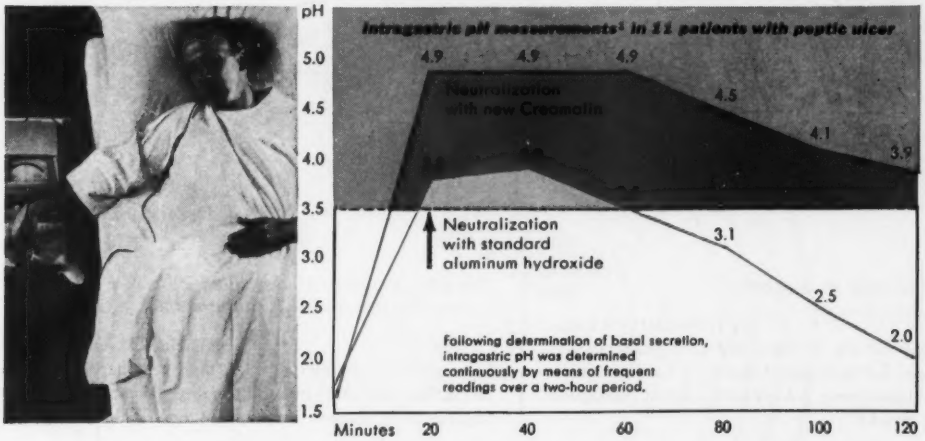
Acts as well in people as in test tubes

in vivo
neutralizes
40 to 50 per cent
faster—
twice as long at
pH 3.5 or above



New Creamalin®

Antacid Tablets

Buffers fast[1-4] for fast relief of pain—
takes up more acid

Heals ulcer fast—action more prolonged *in vivo*

Has superior action of a liquid, with the convenience of a tablet[5]

Each new Creamalin antacid tablet contains 320 mg. of specially processed, highly reactive dried aluminum hydroxide gel (stabilized with hexitol) with 75 mg. of magnesium hydroxide. New Creamalin tablets are pleasant tasting and smooth, not gritty. They do not cause constipation or electrolyte disturbance.

Dosage: Gastric hyperacidity—from 2 to 4 tablets as needed.
Peptic ulcer or gastritis—from 2 to 4 tablets every two to four hours.

How Supplied: Creamalin Tablets, bottles of 50, 100, 200 and 1000.
Also available: New Creamalin Liquid (1 teaspoon=1 tablet), bottles of 8 and 16 fl. oz.

References: **1.** Schwartz, I. R.: *Current Therap. Res.* 3:29, Feb., 1961. **2.** Beekman, S. M.: *J. Am. Pharm. A.* (Scient. Ed.) 49:191, April, 1960. **3.** Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A.* (Scient. Ed.) 48:381, July, 1959. **4.** Data in the files of the Department of Medical Research, Winthrop Laboratories. **5.** Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A.* (Scient. Ed.) 48:384, July, 1959.

Winthrop LABORATORIES
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FOR PEPTIC ULCER • GASTRITIS • GASTRIC HYPERACIDITY

ORIGINAL RESEARCH SERVING THE PHYSICIAN

SANDOZ

in leading headache clinics,
the drug of choice for migraine is

CAFERGOT®

First thought in migraine:

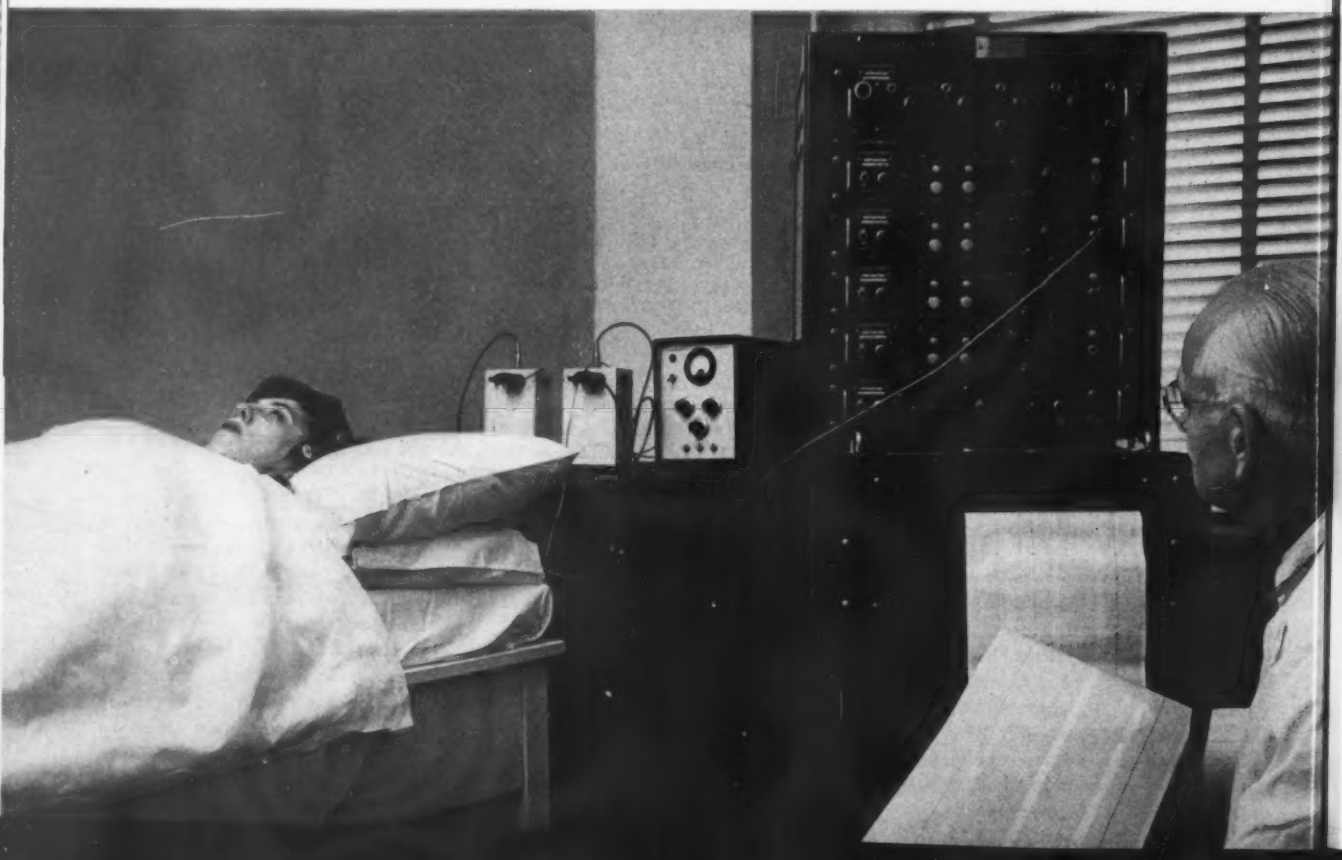
CAFERGOT TABLETS: ergotamine tartrate 1 mg., caffeine 100 mg. (Color: light gray, sugar-coated.) Dosage: 2 at first sign of attack; if needed, 1 additional tablet every ½ hour until relieved (maximum 6 per attack).

CAFERGOT SUPPOSITORIES: ergotamine tartrate 2 mg., caffeine 100 mg. Dosage: 1 as early as possible in attack; second in 1 hour, if needed (maximum 2 per attack).

When the headache is associated with nervous tension and G.I. disturbance:

CAFERGOT P-B TABLETS: ergotamine tartrate 1 mg., caffeine 100 mg., Bellafoline 0.125 mg., pentobarbital sodium 30 mg. Warning: May be habit forming. (Color: bright green, sugar-coated.) Dosage: same as Cafergot Tablets.

CAFERGOT P-B SUPPOSITORIES: ergotamine tartrate 2 mg., caffeine 100 mg., Bellafoline 0.25 mg., pentobarbital sodium 60 mg. Warning: May be habit forming. Dosage: same as Cafergot Suppositories.



Geriliquid®

NIACIN AND GLYCINE

PROVIDES SUSTAINED WARMTH OF EXTREMITIES

In patients with impaired peripheral circulation, Geriliquid warms cold hands and feet through rapid, safe vasodilation by niacin, and provides continuing sustained vasodilation and heat radiation by the thermogenic action of glycine.

Other Benefits:

- **Increases ability to walk farther with less pain**
- **Relieves pain, dizziness and faintness**
- **Improves appetite and brightens the mood**

Composition: Each 5 ml. contains: Niacin 75 mg., Glycine 750 mg. in a sherry wine base. Contains Alcohol 5%.

Dosage: One or two teaspoons three times daily before meals.

Supplied: 8 oz. bottles. 72260

LAKESIDE LABORATORIES, INC.
Milwaukee 1, Wisconsin

in acute, uncomplicated urinary tract infections... effective low dose therapy with FURADANTIN® 50 mg. q.i.d.

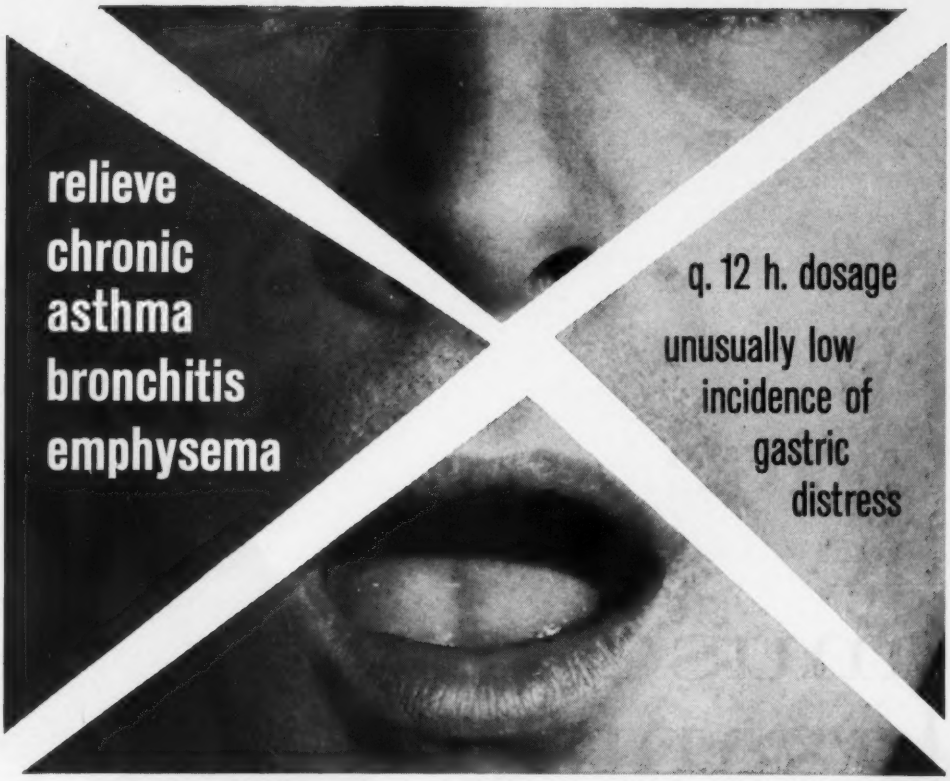
brand of nitrofurantoin

In acute infections of the urinary tract involving gram-negative organisms (predominantly coli-aerogenes group), Welling and colleagues[1] found that patients responded clinically to FURADANTIN 50 mg. q.i.d. "as readily as to 100 mg. dosage." Particularly with moderate fluid restriction, Thompson and Amar[2] consider that 50 mg. FURADANTIN tablets provide "urine concentrations sufficient to clear the majority of acute uncomplicated infections"—and with "complete obviation of nausea." Lippman et al.[3] also reported minimal side effects with FURADANTIN 50 mg. q.i.d. in prolonged prophylactic use.

Patients who do not respond to FURADANTIN 50 mg. q.i.d. after 2 or 3 days should be given an increased dosage—FURADANTIN 100 mg. q.i.d. Patients with complicated, chronic or refractory urinary tract infections should receive FURADANTIN 100 mg. q.i.d. from the outset. FURADANTIN is available in *Tablets* of 50 mg. and 100 mg., and in an *Oral Suspension* containing 25 mg. of FURADANTIN per 5 cc. teaspoonful.

REFERENCES: 1. Welling, A.; Watkins, W. W., and Raines, S. L.: J. Urol. 77:773, 1957 2. Thompson, I. A., and Amar, A D.: J. Urol. 82:387, 1959. 3. Lippman, R. W.; Wrobel, C. J.; Rees, R., and Hoyt, R.: J Urol 80:77, 1958.

EATON LABORATORIES, Division of The Norwich Pharmacal Company, NORWICH, NEW YORK



AMINOPHYLLINE DURA-TABS®

Oral Sustained Medication* Aminophylline 4½ gr. (.3 Gm.)

Patients breathe easier all day, sleep better all night as each dose of Aminophylline Dura-Tabs provides effective blood levels for up to 12 hours. Few patients experience gastric distress since only a fraction of the daily dosage contacts the stomach. Economical, convenient, well tolerated, Aminophylline Dura-Tabs...

eases bronchospasm, reduces bronchial edema, increases breathing capacity

Other indications: congestive heart failure, angina pectoris, paroxysmal dyspnea, Cheyne-Stokes respiration.

Dosage: Adults, 1 to 2 Aminophylline Dura-Tabs q. 12 h.; Children under 10, one-half Aminophylline Dura-Tabs q. 8 to 10 h. Bottles of 30, 100, 250 scored Dura-Tabs.

for Samples please write

WYNN
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REFER TO PDR Page 821

*U.S. Pat. No. 2,895,881

twice
the
muscle
relaxant
potency
for greater
relief
of pain
and spasm

NEW PARAFON®

Combining a superior skeletal muscle relaxant[1-3] with a preferred musculoskeletal analgesic,[4,5] *new* PARAFON FORTE rapidly relieves *both* pain and muscle stiffness in low back disorders. Thus, the effective dual action of PARAFON FORTE increases the patient's range of motion and hastens recovery. PARAFON FORTE is equally effective in other musculoskeletal disorders, such as myositis, whiplash injuries, strains or sprains, and fibrositis. Side effects are rare, almost never require discontinuation of therapy.

FORTE

PARAFLEX® Chlorzoxazone* 250 mg.
TYLENOL® Acetaminophen 300 mg.

Dosage: Two tablets q.i.d. *Supplied:* Scored, light green tablets, imprinted "McNEIL," bottles of 50.

References: (1) Settel, E.: Clin. Med. *6*:1373, 1959. (2) Peak, W. P., and Smith, R. T.: Penn. Med. J. *63*:833, 1960. (3) Mayle, F. C.; Sullivan, P. D., and Auth, T. L.: Med. Ann. D. C. *28*:499, 1959. (4) Roth, J. L. A.: Med. Clin. N. Amer. *41*:1517, 1957. (5) Batterman, R. C., and Grossman, A. J.: J.A.M.A. *159*:1619 (Dec. 24) 1955.

*U.S. Patent No. 2,895,877

McNEIL LABORATORIES, INC., Fort Washington, Pa.

McNEIL

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a **New**

unique product for

Nausea and Vomiting of Pregnancy

motion sickness

inner ear disturbance

Bucladin

pleasant-tasting Softab* form
melts quickly in the mouth
no water needed.

attacks basic causes centrally and peripherally.

contains both antiemetic and antispasmodic.

well tolerated · long acting.

lower in cost.

Each Softab Contains:

Buclizine Dihydrochloride	50 mg.
Vitamin B_6	10 mg.
Scopolomine (Hyoscine)	0.2 mg.
Atropine	0.05 mg.
Hyoscyamine	0.05 mg.

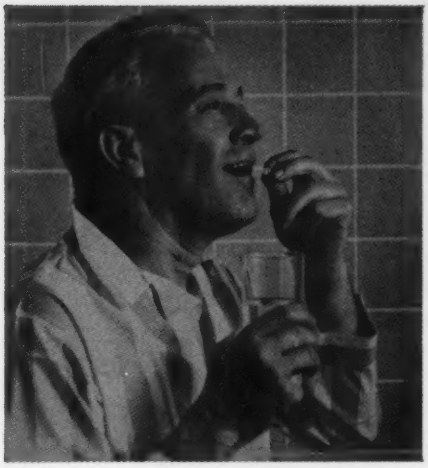
Write for samples and literature

Stuart

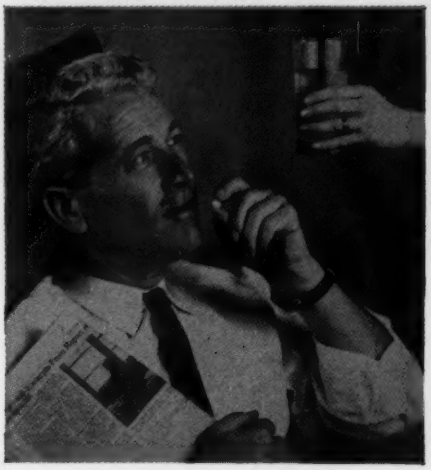
THE STUART COMPANY, PASADENA, CALIFORNIA

*TRADEMARK
PATENT PENDING

all it takes for sustained protection in asthma



One tablet on arising protects through the working day, virtually eliminates the need for emergency daytime medication.



One tablet 12 hours later lets the patient sleep, reduces the need for middle-of-the-night emergency medication.

New Tedral® SA

Sustained-Action antiasthmatic

■ protects against bronchial constriction ■ reduces mucous congestion ■ increases vital capacity and ability to exhale ■ reduces frequency and severity of asthmatic attacks ■ convenient b.i.d. dosage

Each tablet contains 180 mg. theophylline, 48 mg. ephedrine HCl, and 25 mg. phenobarbital.

WARNER CHILCOTT

GP15 makers of TEDRAL GELUSIL PROLOID PERITRATE MANDELAMINE MORRIS PLAINS, N.J.

What now?

Chymar®, for one thing

THE SUPERIOR SYSTEMIC ANTI-INFLAMMATORY ENZYME

to control inflammation, swelling and pain in ACCIDENTAL TRAUMA and general surgery[1-3]

In a study of 491 cases that included 47 fractures, 45 tonsillectomies, 61 herniotomies and 31 cyst removals, it was concluded that: "chymotrypsin reduces or prevents traumatic and surgical edema and hematoma, accelerates absorption of blood and lymph effusions, reduces pain, promotes wound-healing, and may enhance or augment the action of antibiotics."[1]

the systemic route to faster healing at any location

1. Cigarroa, L. G.: J. Internat. Coll. Surgeons *34*:442, 1960. 2. Téitel, L. H., *et al.*: Indust. Med. *29*:150, 1960. 3. Billow, B. W. *et al.*: Southwestern Med. *41*:286, 1960

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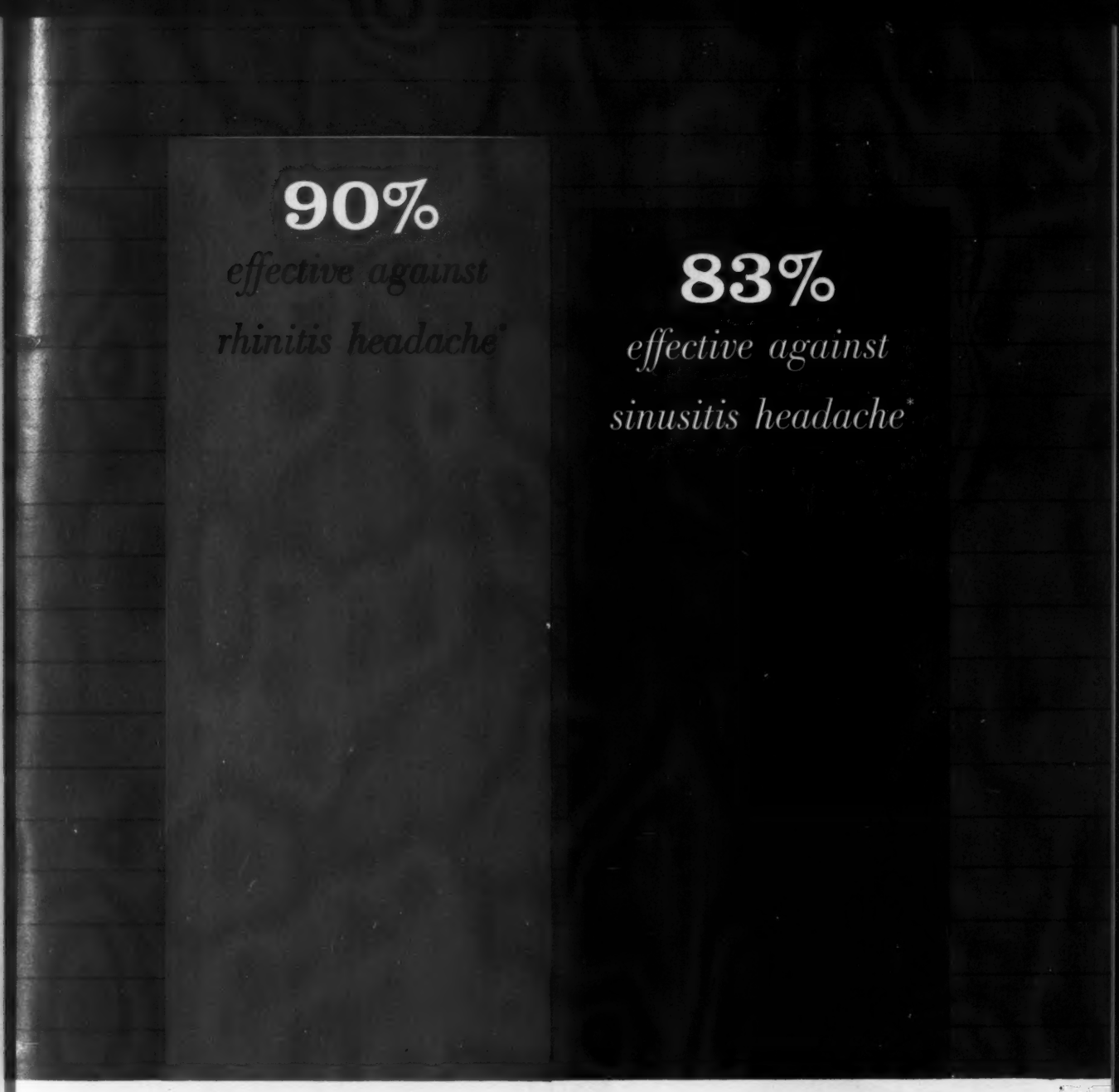
CHYMAR

Chymar Aqueous and Chymar (in oil) contain crystallized chymotrypsin, a proteolytic enzyme with systemic anti-inflammatory properties. Each cc. of Chymar contains 5000 Armour Units of chymotrypsin, 0.18% methyl paraben, 0.02% propyl paraben, 2% aluminum monostearate, q.s. sesame oil. Each cc. of Chymar Aqueous contains 5000 Armour Units of chymotrypsin, 0.9% sodium chloride, 0.2% calcium acetate, 0.01% thimerosal, q.s. Water for Injection. ACTION: Reduces inflammation of all types; reduces and prevents edema except that of cardiac or renal origin; hastens absorption of blood and lymph extravasates; helps to liquefy thick tenacious mucous secretions; restores local circulation; promotes healing; reduces pain. INDICATIONS: Chymar is indicated in respiratory conditions such as asthma, bronchitis, sinusitis and rhinitis, in accidental trauma to speed reduction of hematomas, bruises and contusions; in inflammatory dermatoses to ameliorate acute inflammation in conjunction with standard therapies; in gynecologic conditions therapeutically or in conjunction with antibiotics in pelvic inflammatory disease; in surgical procedures as biopsies, G.I surgery, hernia repairs, hemorrhoidectomies, plastic surgery and thrombophlebitis; in peptic ulcers and ulcerative colitis as an adjunct to diet, antispasmodics, antacids, etc.; in genitourinary disorders as epididymitis, orchitis and prostatitis; in eye conditions as acute conjunctivitis, traumatic edema, hematomas, and eye surgery, in dental and oral surgery as fractures of the mandible or maxilla, alveolectomies, denture fitting, and multiple extractions; and in obstetrics as in episiotomies, breast engorgement, and thrombophlebitis. PRECAUTIONS: Chymar and Chymar Aqueous are for intramuscular injection only. Although sensitivity to chymotrypsin is uncommon, reactions to anti-inflammatory enzymes have been observed. The usual remedial agents (epinephrine, corticotropin (HP* ACTHAR Gel), antihistamine, aminophylline, etc.) should be readily available in case of untoward reactions. Precautions (scratch testing for Chymar (in oil), scratch or intradermal testing for Chymar Aqueous) should be exercised in those patients with known or suspected allergies or sensitivities. As with any foreign protein, patients may develop sensitivity from repeated injections. It is, therefore, recommended that the above precautions be considered prior to administration. In further treatment of those patients in whom a previous injection of chymotrypsin produced signs of possible sensitivity, such as localized edema and erythema at injection site, urticaria, conjunctivitis, etc., particular care must be exercised. INCOMPATIBILITIES: With usual agents, none known—e.g., compatible with antibiotics and anesthetics. DOSAGE: 0.5 cc. to 1.0 cc. deep intramuscularly once or twice daily, depending on severity of condition. Decrease frequency as course of condition is altered. In chronic or recurrent conditions, 0.5 cc. to 1.0 cc. once or twice weekly. SUPPLIED: Chymar in Oil 5 cc. vials and Chymar Aqueous 1 and 5 cc. vials; 5000 Armour Units of proteolytic activity per cc. *Highly Purified.

© April, 1961, A. P. Co.



clinically demonstrated – Sinutab®

provides "excellent symptomatic relief"* of sinus and other common frontal headaches on just 2 tablets q.4h. Sinutab aborts pain—decongests mucosa—relieves pressure—relaxes tension.

*Flohr, Leonard, *et al.*: Clin. Med. 8:3 (March) 1961.

Marks of TEDRAL GELUSIL PROLOID PENITRATE MANDELAMINE

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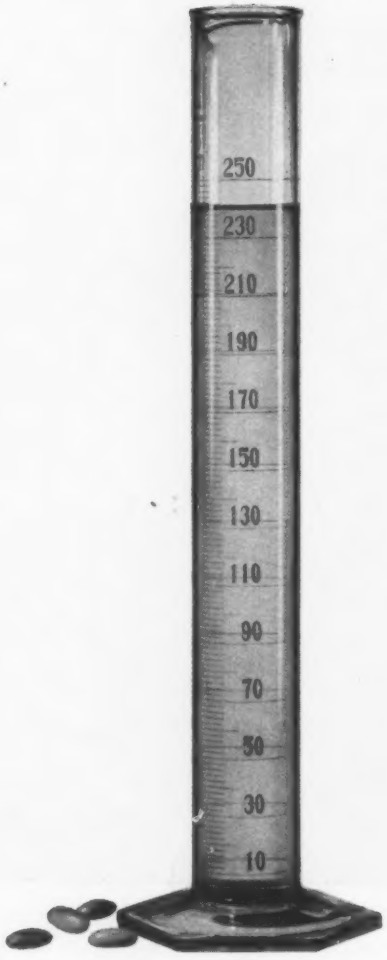
MS13

In acute and chronic diarrhea the most effective symptomatic solution to the dual problem:

dual action Sorboquel® tablets

(polycarbophil-thihexinol methylbromide)



fast action 1

for too fluid feces:

Exceptional water-binding capacity of polycarbophil to absorb free fecal water

fast action 2

for too frequent evacuations:

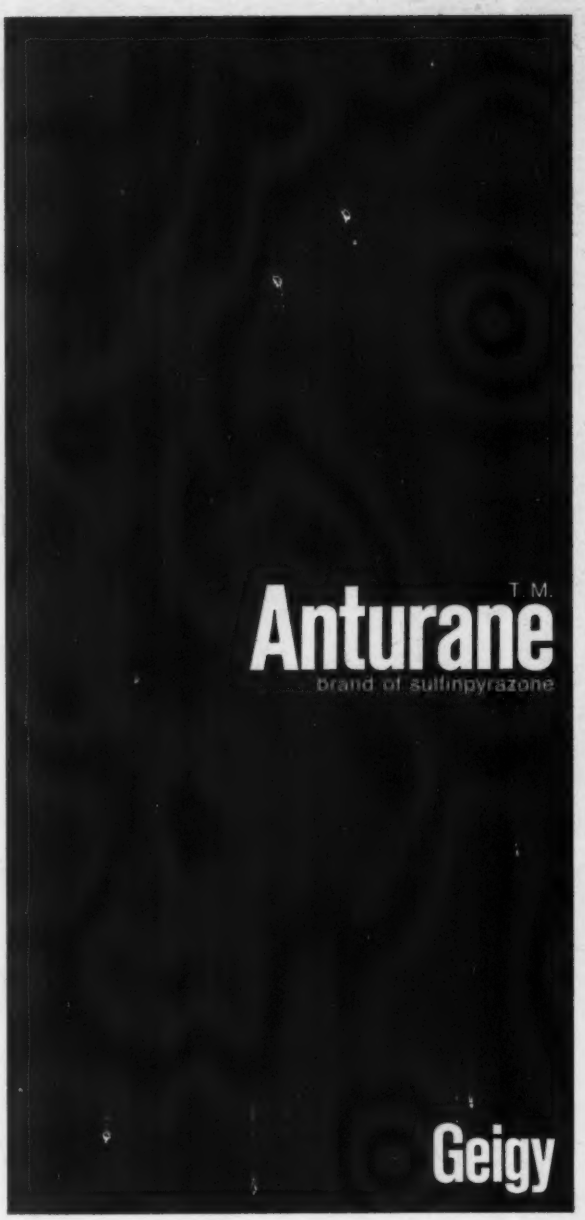
Superior, yet selective, nonopiate antimotility action of thihexinol methylbromide

(Complete information regarding the use of Sorboquel Tablets is available on request.)

dosage: For older children and adults, initial dosage of one SORBOQUEL Tablet q.i.d. is usually adequate. Severe diarrheas may require six, or even eight, tablets in divided daily doses. (Dosages exceeding six tablets a day should not be employed over prolonged periods.)

Supplied: Sorboquel Tablets, bottles of 50 and 250. Each tablet contains 0.5 Gm. polycarbophil and 15 mg. thihexinol methylbromide.

WHITE LABORATORIES, INC., Kenilworth, New Jersey White



effectively checks the progress of gout by intensive, sustained, uricosuric action

In the long-term treatment of gout, the value of a uricosuric agent such as Anturane in preventing accumulation of the urate deposits responsible for chronic disability and joint derangement is well established.[1]

Clinical experience has demonstrated that Anturane not only prevents formation of new urate deposits, but with sustained therapy, also causes absorption of pre-existing tophi.[2] With reduction in hyperuricemia, the incidence and severity of acute attacks are reduced,[3] the mobility of affected joints is improved,[4] and lingering joint pain is relieved.[2,4]

References: 1. Seegmiller, J. E., and Grayzel, A. I.: J.A.M.A. 173:1076, 1960. 2. Yü, T. F., Burns, J. J., and Gutman, A. B.: Arth. & Rheumat. 1:532, 1958. 3. Kersley, G. D., Cook, E. R., and Tovey, D. C. J.: Ann. Rheumat. Dis. 17:326, 1958. 4. Gutman, A. B., and Yü, T. F.: Bull. New York Acad. Med. 34:267, 1958.

Full product information regarding dosage, side effects, precautions and contraindications available on request.

Anturane[T.M.], brand of sulfinpyrazone: Scored tablets of 100 mg in bottles of 100.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

Male, Age 9; Dx: Poison Ivy Dermatitis. Rx: Celestone, 1 tab. q.i.d. for two days, 1 tab. t.i.d. for two days, 1 tab. b.i.d. for one week, and 1 tab. daily for 7 days. Photograph shows the patient before treatment.

Allergic/inflammatory flare-up!

Results: Within 24 hours there was regression of intense inflammation and vesicles as well as a high degree of relief from itching. The patient had cleared completely at the end of ten days. Photograph after three days. Photographs courtesy of M. Murray Nierman, M.D., Calumet City, Ill.

Schering

A new achievement in corticosteroid activity: CELESTONE (betamethasone) has been called "perhaps the most important step ahead since the discovery of prednisone and prednisolone..."[1] and "unquestionably the most active adrenocortical steroid we have studied to date."[2] Pre-introductory clinical studies have established not only the high antiallergic/anti-inflammatory activity of CELESTONE but also its "low incidence of side effects...[and] absence of new toxic effects...."[3]

Three significant clinical advantages: In reporting results of a study of 154 dermatologic patients, treated up to 9 months, the investigators[1] cite as "three important clinical advantages of betamethasone [CELESTONE]: its almost uniform effectiveness at exceptionally low dosages, the striking absence of hormonal side effects in our series, and the ability of this corticosteroid to elicit a good therapeutic response in patients who had previously done poorly on other steroids."

Rapid remission with new Celestone

the first major advance in corticosteroid therapy in over 2½ years

Greater utility–ease of use: Gratifying results have been achieved with CELESTONE in a broad range of steroid-responsive disorders, from bronchial asthma and pollenosis to allergic dermatoses, inflammatory ocular diseases and rheumatoid arthritis. Rapid subsidence of allergic or inflammatory flare-up can usually be expected on average daily dosages of from 2 to 8 tablets. The single tablet strength (0.6 mg.) simplifies dosage schedules and facilitates proper dosage adjustment when patients are switched from other corticosteroids. M-390

Safety-speed factor: Results with CELESTONE in 353 dermatologic patients[2] indicate that "its high degree of effectiveness and virtual absence of side effects in low dosages, which permit a simplified therapeutic regimen, make betamethasone [CELESTONE] an exceptionally useful corticosteroid in acute, short-term conditions."

For complete details, consult latest Schering literature available from your Schering Representative or the Medical Services Department, Schering Corporation, Bloomfield, New Jersey.

Bibliography: 1. Gant, J. Q., and Gould, A. H.: Betamethasone: A Clinical Study. Paper presented at First Conference on the Clinical Application of Betamethasone – A New Corticosteroid, New York City, May 8, 1961. 2. Nierman, M. M.: The Use of Betamethasone in Dermatology. *Ibid.* 3. Frank, L.: The Place of Betamethasone in Dermatologic Practice. *Ibid.*

NEW CELESTONE™

(betamethasone) **Tablets, 0.6 mg.**

the first complete physiologic regulator of female cyclic function

ENOVID®

(brand of norethynodrel with ethynylestradiol 3-methyl ether)

The basic action

ENOVID closely mimics the balanced progestational-estrogenic action of the functioning corpus luteum. This action is readily understood by a simple comparison. In effect, ENOVID *induces a physiologic state which simulates early pregnancy — except that there is no placenta or fetus.* Thus, as in pregnancy, the production or release of pituitary gonadotropin is inhibited and ovulation suspended; a pseudodecidual endometrium ("pseudo" because neither placenta nor fetus is present) is induced and maintained. Further, during ENOVID therapy, certain symptoms typical of normal pregnancy may be noted in some patients, such as nausea — which is usually mild and disappears spontaneously within a few days — breast engorgement, some degree of fluid retention, and often a marked sense of well-being. There is no androgenicity. ENOVID *is as safe as the normal state of pregnancy.*

The basic applications

1. Correction of menstrual dysfunction. *Cyclic* therapy with ENOVID controls dysfunctional uterine bleeding (menorrhagia, metrorrhagia) and often establishes a normal menstrual cycle in amenorrhea.

2. Ovulation suppression (to suspend fertility). For this purpose ENOVID is administered *cyclically,* beginning on day 5 through day 24 (20 daily doses). The ovary remains in a state of physiologic rest and there is no impairment of subsequent fertility. Continuous administration for more than two years is not recommended.

3. Postponement of the menses for reasons of health (impending hospitalization for surgery, during treatment of Bartholin's gland cysts, acute urethritis, rectal abscess, trichomonal or monilial vaginitis), travel, forthcoming marriage, or pressing business or professional engagements. For this purpose ENOVID may be started at any time in the cycle up to one week before expected menstruation. Upon discontinuation, normal cyclic bleeding occurs in three to five days.

4. Threatened abortion. *Continuous* ENOVID treatment provides balanced hormonal support for the endometrium in threatened or habitual abortion.

5. Endocrine infertility. ENOVID has been used successfully in *cyclic* therapy of endocrine infertility, promoting subsequent pregnancy through a probable "rebound" phenomenon.

6. Endometriosis. *Continuous* therapy with ENOVID corrects endometriosis by producing a pseudodecidual reaction with subsequent absorption of aberrant endometrial tissue.

The basic dosage

Basic dosage of ENOVID is 5 mg. daily in *cyclic* therapy, beginning on day 5 through day 24 (20 daily doses). Higher doses may be used with complete safety to prevent or control occasional "spotting" or breakthrough bleeding during ENOVID therapy, or for rapid effect in the emergency treatment of dysfunctional uterine bleeding and threatened abortion.

ENOVID is available in tablets of 5 mg. and 10 mg.

Literature and references, covering over five years of intensive clinical study, available on request.

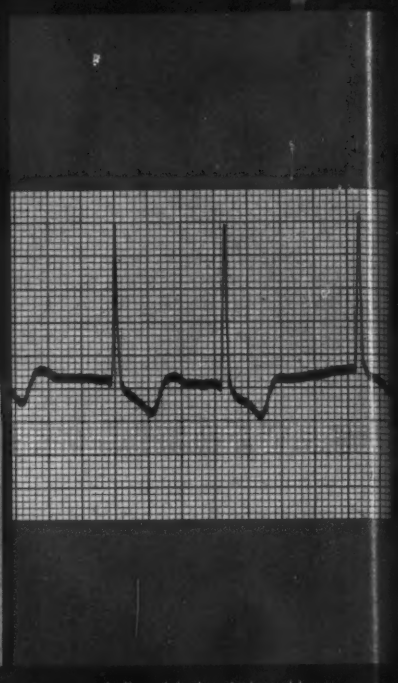
SEARLE *Research in the Service of Medicine*

...*unfettered*

From the beginning, woman has been a vassal to the temporal demands—and frequently the aberrations—of the cyclic mechanism of her reproductive system. Now, to a degree heretofore unknown, she is permitted normalization, enhancement, or suspension of cyclic function and procreative potential. This new physiologic control is symbolized in an illustration borrowed from ancient Greek mythology—Andromeda freed from her chains.

*before treatment**

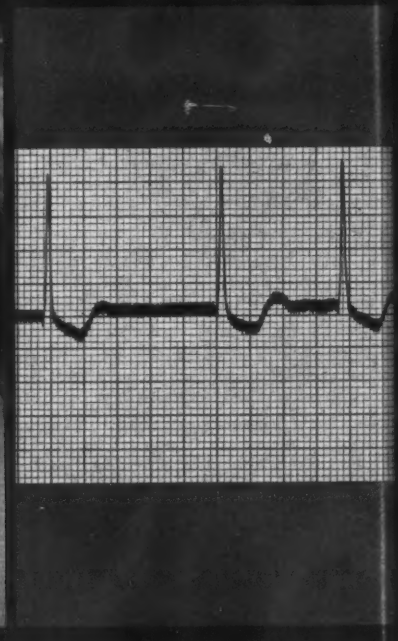
Cardiac enlargement and pulmonary congestion.



Left ventricular strain and hypertrophy (ST depression in Lead V4).

after one month on HYDROPRES*

Reduction in heart size and clearing of congestion.



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References: 1. Altschule, M. D.: M. Sc. *6*:560, 1959. 2. Rufin, J. M.; Baylin, G. J.; Legerton, C. W., and Textor, E. C., Jr.: Gastroenterology *23*:252, 1953. 3. Texter, E. C., *et al.*: Ann. Int. Med. *51*:1275, 1959. 4. Kasich, A. M.; Boleman, A. P., Jr., and Rafsky, J. C.: Am. J. Digest. Dis. *1*:361, 1956. 5. Roth, J. L. A.; Wechsler, R. L., and Bockus, H. L.: Gastroenterology *31*:493, 1956. 6. Rafsky, J. D.: Gastroenterology *27*:29, 1954.

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1. Jeans & Marriott: Infant Nutrition, Ed. 4, Mosby (1947) 2. Hoagland, R. & Snider, G. G.: J. Nutrition 26:219 (1943) 3. Hansen, A. E., et al: J. Nutrition 66:565 (1958)

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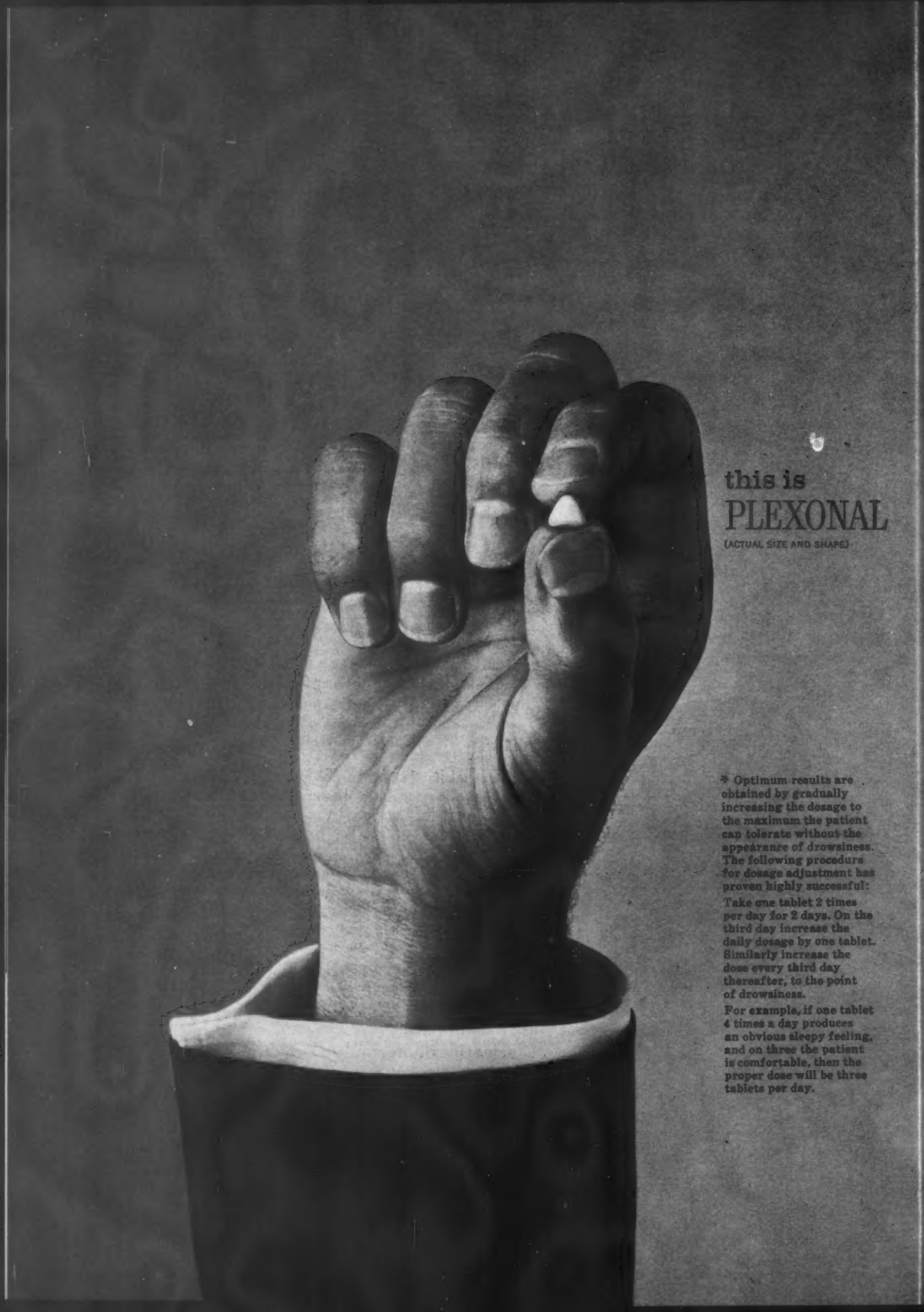

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1. Scheifley, C. H.: Proc. Staff Meet. Mayo Clin. 34:408 (Aug. 19) 1959.
2. Davanloo, H.: Am. J. of Psychiat. 117:740 (Feb.) 1961.

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1. Danowski, T. S.: Diabetes *9*:292, 1960.
2. Fajans, S. S., in Williams, R. H.: Diabetes, New York, Hoeber, 1960, p. 420.
3. Lee, C. T., and Duncan, G. G.: Metabolism *5*:144, 1956.

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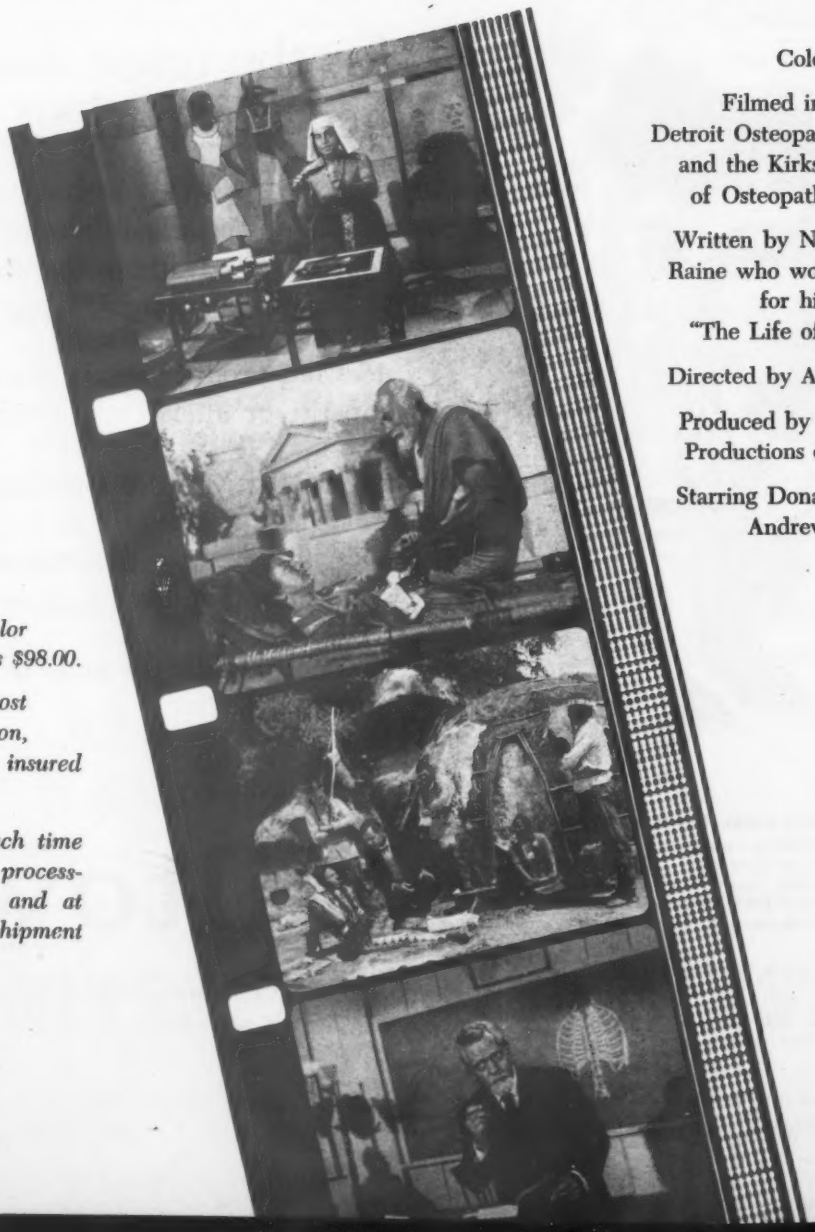

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1. Najarian, J. S., *et al.*: Am. J. Surg. *96*:172, 1958. 2. Wolfe, S. J., *et al.*: cited by Fast, B. B., Arch. Int. Med. *10*:487, 1958. 3. Editorial, New England J. M. *259*:1181, 1958. 4. Editorial, J.A.M.A. *169*:1076, 1959. 5. Britton, R. C.: Connecticut M. J. *22*:537, 1958.

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Presidential acceptance address

CHARLES L. NAYLOR, D.O., Ravenna, Ohio*

"Out of every crisis, every tribulation, every disaster, mankind rises with some share of greater knowledge, of higher decency, of purer purpose."

These words, spoken by Franklin D. Roosevelt when he accepted his party's nomination for the presidency in 1932, are as appropriate to the osteopathic profession today as they were to the strife-torn country which he was about to lead.

The battles we have fought during the past year have been arduous, and we have suffered great losses. But your presence here today, your rededication to the principles and ideals which guide our actions, are profound testimony that from our trials we have in fact emerged with greater knowledge, higher decency, and purer purpose.

What have we learned from our tribulations during the past year? We have learned, first of all, that this profession has great strength and that the only way it can be destroyed is from within. No agency or group of individuals outside this profession could have accomplished what the leaders of the conspiracy in California accomplished. Their careful plans were effective only because they were able to hide their motives under the guise of helping this profession to improve and expand.

We have also been reminded that only by collective action can we be assured of individual survival.

The strategy of "divide and conquer" is as old as the history of warfare. Those who would destroy this profession now realize that if enough individuals can be persuaded by faulty logic and vague promises, they will create a core of discontent which will spread like a cancer throughout their organization. And once an organization ceases to function as a unit, once it is torn by strife and indecision, it becomes easy prey and bears within it the seeds of its own destruction.

We have learned that it is the unique contribution of osteopathy and not its similarity to medicine that attracts financial and other support. The grants which our colleges have received in the past few years for research and education have specified that they were to advance osteopathic programs and not programs which could be pursued in any other medical school. The legislative progress we have made, the increased recognition which this profession has gained, are based on our unique qualifications to serve and the unique place we hold within the healing arts.

We have learned again the importance of having the osteopathic concepts as an integral part of all phases of osteopathic education and practice. It can not be denied that we allowed the osteopathic philosophy to be gradually undermined in the Los Angeles college until we suddenly discovered that osteopathy was being equated with physical medicine and shunted off to a dark corner. As we continue as a profession, we must place new emphasis on the osteopathic concepts and make certain that they permeate all areas of the profession.

Finally, we have learned the difficult truth that communications must begin and end with face-to-face contact. The leadership of this profession has wrongly assumed that by printing and distributing newsletters, brochures, and special articles it is communicating with the membership. Printed information is essential, but it cannot replace the difficult but essential task of individual, face-to-face discussion, not only by national officers but by leaders on the state and local levels.

Painful as these truths have been, their recognition has served to clear away the underbrush in our profession and bring an end to a period of loose thinking and indecision. We are no longer standing at the crossroads, debating which direction to travel. We have recognized our errors, vowed to correct

Presented at the Inaugural Luncheon during the 1961 Annual Meeting, Chicago, July 12, 1961.

*Address, Western Reserve Hotel Annex

During these past few days we have rededicated ourselves to those ideals which guide our lives. These sentiments are fine, but you, individually, must decide if you are willing to support those objectives and if you are willing to make the sacrifices necessary to see that they are fulfilled. The decision is yours

them, and rededicated ourselves to those ideals which guide us.

I know of no better way to show our dedication of purpose than by the actions which the House of Delegates has taken during the past few days. I am proud of you. You have "stood tall and been counted." You have shown to the members of this profession and to the public that we are not going to be counted out.

During the coming year your President, or a representative designated by him, will be available at all times to any local or divisional society, specialty college, or affiliated organization to answer your questions and attempt to improve this face-to-face communication. If you have a question on A.O.A. policy, call us, and we will give you the answer. If you are unsure of how your decision on a local level might affect national policy, call us. If you have good news, call us. If you have bad news, call us.

Let us attempt to keep in closer contact so that you will know what is going on at the A.O.A. level in Chicago and we will know what is going on in your local area. If we both are informed, we can help each other. If one or both of us are ignorant of the facts, the only result can be indecision and lack of understanding.

You voted to continue the Conference Committee and have thereby left the door open for further discussions with all groups interested in the health care of the people. But at the same time, you have openly declared that the A.M.A. has shown bad faith in their dealings with us, and that if any further progress is to be made they will have to recognize our legitimacy and independence.

You have unanimously voted to continue the fight in California and to support that fight in the most direct manner possible—with dollars out of your own pockets. This decision may not be popular with the individual members of your state societies, but it is now up to you to tell them not only what the House did but why they did it. It may not be possible for you to have a tape recording of all that was said in the House, but I am sure that if you tell your members what was said and the manner in which it was said—if you can convince them that the House is fighting for the survival and development of this profession—I am sure that you will have no difficulty.

And now I would like to say a few words about the objects and purposes of this organization—our basic reasons for existence. Let me read this section of the Constitution of the A.O.A.:

"The objects of this Association shall be to promote the public health, to encourage scientific research, and to maintain and improve high standards of medical education in osteopathic colleges."

To promote public health. We most directly serve the public health, of course, in our everyday activities of seeing patients and caring for their needs. As osteopathic physicians, however, we have a special duty to see that the particular philosophies of the osteopathic school of medicine become essential parts of our practice. If we ignore these concepts, if we apply our fingers frequently to the syringe but seldom to the musculoskeletal system, we are betraying our heritage and in the process failing to provide our full share of support in promoting the public health.

Beyond our offices we as physicians have duties as citizens in our communities. These duties are outlined in the A.O.A. Code of Ethics. Let me quote, in part:

> As good citizens, it is the duty of physicians to be vigilant for the welfare of the community, and to bear their part in sustaining its laws and institutions; especially should they cooperate with the proper authorities in the administration and observation of sanitary laws and regulations. Physicians should be ever ready to give counsel to the public in relation to subjects especially appertaining to their profession.

All this means that you, as a physician, must be ready to serve, often without financial gain, as a public health leader in your community.

Finally, I think the time has come for this profession to publicly declare that we are interested in all segments of the public health, but that we are not particularly concerned with who pays for our services. I think we should make it clear that we want the best available health care for all people, at the lowest possible cost.

I think we should clearly state that we are physicians and that our main interest is helping people. We stand willing to co-operate with all agencies, be they private or governmental, to improve health care and make certain that all who need care will receive it.

To encourage scientific research. This should pose few problems, but I am afraid that it does. There still seems to exist within both the medical and osteopathic professions an attitude that research is something done by gray-haired scientists in a

laboratory and that whatever they do is far removed from the practice of medicine. This attitude is unfortunate and wrong. We as osteopathic physicians stress the art of medicine, but let us never forget that medicine is also a science and that from research that science improves.

Certainly we would like to "prove" the osteopathic concepts and demonstrate to the entire scientific community that what we practice is more than empiric medicine. But we cannot begin to prove anything until we know more about the basic workings of the human body. Of this I fear that we shall never know enough, no matter how much research is done.

Earlier this week I proposed, and the House adopted, a program which would immediately accelerate the research programs of this profession, at both the basic science and clinical levels. The details of this program will be decided upon in the near future, but once the program has been implemented it deserves your enthusiastic support.

How can you help?

You can volunteer to help raise money for research from outside sources. The National Osteopathic Foundation depends to a large extent on the information supplied it by practicing physicians. If you know of a potential source of grants to this profession, transmit this knowledge to the N.O.F. and the Council on Development, and they will follow up the lead.

You can encourage research activity through your alumni associations. You can make it clear to the administration of your school that you expect the faculty and students to engage in research activities as part of the total program. You can submit definite suggestions for research projects which might be undertaken at the school and, again, you can indicate that you stand ready to contribute to the expanded research program. The voice of an alumni body will be heard, and if it is a persuasive voice its suggestions will be followed.

Finally, an objective of the Association is *to maintain and improve high standards of medical education in osteopathic colleges.*

Here again your voice as an alumnus can be heard. You can make it clear to the administration that you insist that this school remain an osteopathic institution and that the osteopathic concepts are integrated into all areas of teaching.

Since the faculty is at the heart of any college program, you can support the college in its efforts to recruit new faculty, and can make it clear that this faculty must continue to be of the highest caliber and dedicated to the basic principles of the osteopathic profession.

Colleges, all colleges, are always short of funds; so if an improved educational system demands greater contributions by alumni, you must again be ready to dig deep and provide the support it needs. O.P.F. is the most direct means to offer this support, and you should be willing to contribute to this fund without hesitation or grumbling.

Finally, perhaps the most subtle way that you can improve the educational system is to insist on the highest standards in your own practice. If you as a practicing physician dedicate yourself to the highest standards of practice you will directly reflect the education and training you have received.

From all this it should become apparent that while the objectives of this Association are simple and direct they are not easily achieved. They require effort, time, money, and, perhaps most important, constant individual vigilance.

During these past few days we have rededicated ourselves to those ideals which guide our lives. These sentiments are fine, but you, individually, must decide if you are willing to support those objectives and if you are willing to make the sacrifices necessary to see that they are fulfilled. The decision is yours.

Disorders of the duodenum: Physiologic approach

ALBERT F. D'ALONZO, A.B., D.O. Philadelphia, Pennsylvania*

Seeking an understanding of symptoms often produces confusion for the clinician. In the upper abdomen disease primary to a given organ frequently results in altered function of both itself and contiguous structures. A consideration of the surgical anatomy of the area will substantiate this. An explanation is not made complete by asking merely, Is there a lesion? and, Where and what is the lesion? One must also ask, Why does the lesion produce its particular symptom complex? This is especially true of the duodenum, which is unique in that it is intimately related both anatomically and physiologically to practically every organ in the upper abdomen.

The duodenum is the common denominator of the upper abdomen.[1] It is in direct continuity with the stomach and the jejunum. The duodenal bulb, the first part of the duodenum, is integrated both structurally and functionally with the pyloric antrum; it also has a mesentery of its own. The duodenum proper has no mesentery. The ducts of the liver, gallbladder, and pancreas open into the duodenum at the ampulla of Vater in the descending part of the duodenum. The head of the pancreas lies within the duodenal loop. The duodenal bulb rests on the head and neck of the pancreas; the common bile duct descends behind and may occasionally indent the duodenal bulb; and the gallbladder itself lies in close apposition to the superior and right margins of the first part of the duodenum. The duodenum contains some distinctive glands—Brunner's glands[2]—which are found in a sheet from the pylorus to or beyond the ampulla of Vater, which secrete an abundant alkaline mucus.[3]

Submitted to the faculty of the Philadelphia College of Osteopathy in partial fulfillment of the requirements for the degree Master of Science (Osteopathic Medicine), Philadelphia, Pennsylvania, May 1960.

*Address 2225 Spring Garden St.

The duodenum is innervated by each of the two divisions of the autonomic nervous system. The parasympathetic supply is by the vagus nerves, and the sympathetic supply is by the major and minor splanchnic nerves and connections from the lumbar sympathetic chains. The vagal fibers are preganglionic and synapse with neurons of the intrinsic plexuses of the duodenum. The preganglionic fibers of the sympathetic system synapse with cell bodies in the preaortic ganglia (mainly the celiac ganglia), and postganglionic fibers pass from these cell bodies to innervate directly the smooth muscle of the small intestine.

The stomach and the small intestine can be deprived of most of their vagal innervation by sectioning the nerves at the level of the diaphragm. This is a preganglionic denervation; postganglionic vagal denervation is not possible since the second neuron in the vagal pathway is intrinsic. That atropine does not exert its actions only by blocking the effects of impulses arriving by the vagus is shown by the fact that this drug is just as inhibitory to the vagally denervated intestine as to the innervated bowel. The vagus to the gastrointestinal tract is a mixed nerve; some of the fibers exert inhibitory and some excitatory effects.[4]

Motility in a given part of the gastrointestinal tract ordinarily is determined by the local and reflex responses to contents at this site and by reflex influences from other parts of the bowel. Under special circumstances the motility is affected by influences originating on a reflex basis from other organs or by influences from higher centers in the brain. It has been demonstrated experimentally and observed clinically that mechanical or chemical irritation of the peritoneum causes immediate inhibition of intestinal motility (so-called reflex effect elicited by peritoneal irritation).

The name "intestino-intestinal reflex" is used to describe distention of any part of the small intes-

tine which may result in inhibition of the small bowel within a latent period as short as 2 or 3 seconds. The thoracolumbar system contains both afferent and efferent pathways for this intestinointestinal inhibitory reflex,[5,6] and the central connections are contained in the spinal cord from the seventh thoracic to the second lumbar segment.

It has been shown that there are both mechanically and chemically induced duodenogastric reflexes, as well as the jejunogastric inhibitory reflex, which has been observed when sufficient severe sudden distention of any part of the small intestine causes atonicity and inhibition of motility of the stomach and entire small intestine. It should be recognized that anything which will cause reflex liberation of epinephrine may cause inhibition of gastrointestinal motility, exclusive of influences mediated by the adrenergic innervation of the gastrointestinal tract; thus periods of inhibition of gastric and intestinal motility may be produced by severe arterial hypotension, asphyxia, and anoxia.[4]

Knowledge of gastrointestinal intraluminal pressure is important because it gives insight into the normal mechanical processes which occur in the alimentary tract; and secondly, disturbances of gastrointestinal function may be associated with alterations in intraluminal pressure. Intraluminal pressures in the digestive tract have interest in relation to the physiologic activities of the intestine; the mixing and trituration of gastrointestinal contents are dependent on local pressure changes.[7]

Moderately increased intraluminal pressure within the bowel is one of the most common effective stimuli for augmenting gastrointestinal motility.[8] Excessive intraluminal pressures in the gastrointestinal tract may produce pain, collapse, respiratory and cardiovascular irregularities, vomiting, a general inhibition of gastrointestinal motility, accumulation of digestive secretions, interference with blood supply to, and more especially the venous drainage from, the distended region, gangrene, and perforation.[9,10]

The development of a pressure gradient between the intestinal lumen and the abdominal cavity is essential for the final perforation of a penetrating ulcer of the alimentary tract and for the escape of contents through the opening. An increase of intraluminal pressure in a segment results from a force (usually produced by contraction of the muscular coats) which tends to reduce the volume of the segment. The pressure is related to the magnitude and rate of the volume change. Such a reduction of volume expels some of the segmental contents, but this tendency is opposed by a resistance from structures adjacent to this expulsion.[8]

Intraluminal pressure-wave activity of the stomach and duodenum has been found to be increased in patients with peptic ulcer. Duodenal ulcer patients who experience pain demonstrate increased intraluminal pressure-wave activity during the periods of pain.[11]

There is considerable evidence to suggest that disordered motor activity may have a role in the production of ulcer pain. Distention or spasm is a fundamental basis for pain arising from the hollow abdominal viscera.[12] Distention of a balloon inserted into the duodenum can reproduce the pain of peptic ulcer. It is apparent that increases in intraluminal pressure may affect unfavorably the blood supply of the intestine. Intestinal distention, inadequate in degree to embarrass respiration, may exercise a measurable objective effect upon the circulation, resulting in stasis of blood in the lower extremities and in the bowel itself.[10]

It is also of note to consider the quantities of fluid which are secreted into the bowel each day. It has been calculated[10] that approximately 7,000 cc. of fluid reach the bowel each day through the activity of glands which pour their secretions into the upper reaches of the alimentary tube. The sources and amounts of these are: saliva, 1,500 cc.; gastric juice, 2,000 to 3,000 cc.; bile, 300 to 500 cc.; pancreatic juice, 500 to 800 cc.; and succus entericus, 3,000 cc. Even for those of us who believe that this is a conservative estimate, the figures are an impressive illustration of the large amounts of fluid and electrolytes which are poured into the bowel daily. It has been further noted[10] that in an obstructed bowel only 8 to 10 per cent of the amount of water introduced is absorbed, whereas in the normal bowel, 82.5 to 94 per cent is absorbed.

Normally the liver secretes between 0.20 and 0.47 cc. of bile per minute, but under the influence of bile salts or secretin, and in some cholerrhagic states, this figure may rise to 5.0 cc. per minute. Usually, pancreatic juice also passes through the sphincter of Oddi, and its flow necessarily modifies choledochal pressure. Under secretin, as much as 6.6 cc. of pancreatic secretion may enter the duodenum each minute. The sphincter of Oddi may therefore be subjected to a maximal flow of approximately 12.0 cc. of mixed biliary and pancreatic secretions.[13]

For bile to enter the duodenum the pressure in that viscus must be lower than the secretory pressure of the liver and pancreas. In the fasting state, intraduodenal pressure approaches that of the surrounding abdominal cavity. However, spontaneous variations in duodenal tonus or contractile responses to specific foods cause transitory rises in pressure, which at times may exceed 1,400 mm. of water. The importance of intraduodenal pressure on bile evacuation has not been sufficiently appreciated. In the human individual, the sphincter of Oddi teleologically serves as a monitor of pressure within the extrahepatic biliary tract. It is generally accepted that vagal activity stimulates the sphincter, whereas a fat meal is followed first by a contraction and later by a prolonged period of relaxation.

For the purpose of studying the dynamics of the choledochal junction and the mode of action of the sphincter mechanism, Swedish investigators[14] have utilized cineroentgenography during continuous pressure recording in postoperative cholangiography. They demonstrated the opening and closure

of Oddi's sphincter, contracture of the sphincter after administration of morphine, and relaxation after glycerol trinitrate, with rapid emptying of contrast medium into the duodenum or reflux to the pancreatic duct in different phases of the sphincteric contraction and relaxation. In some cases they observed a direct communication between the common bile duct and pancreatic duct, with the formation of a common channel alternating with separate emptying of the respective ducts into the bowel.

The morphinic alkaloids, like their derivatives, almost always bring about a rise in pressure in the biliary tract. This is demonstrable after as little time as 3 to 4 minutes; it reaches a peak after 10 to 12 minutes, after which it falls during the next 10 to 15 minutes. Its effect, however, usually remains in the form of raised pressure for as long as 4 to 6 hours after the injection.

The resistance of the sphincter region is affected by a number of different factors such as drugs, mechanical irritation (including palpation), the use of a probe, infusion of fluid intraductally, chemical irritation caused by contrast media, or the injection of hydrochloric acid into the duodenum.[15]

The role of the duodenum in the regulation of gastric motility has long engaged the attention of physiologists. It was first suggested as a factor in gastric emptying in the early nineties when Hirsch and Von Mering reported on their studies in dogs with duodenal fistulas. Von Mering demonstrated the more rapid emptying of a standard amount of water from the stomach when the fistula was open than when it was closed. He subsequently showed how potent the entrance of milk into the duodenum could be in delaying gastric emptying. The normal evacuation of gastric contents is dependent upon gastric tonus, gastric peristalsis, and the activity of the pyloric sphincter. The duodenum houses a mechanism which exercises an influence over all three. In 1934, Shay and Gershon-Cohen[16] endowed the duodenum with more than perfunctory powers when they described the duodenal mechanism as follows:

> The duodenum, however, sensitive connoisseur, is selective. If the gastric contents are acceptable to the official taster, the duodenal cap, gastric emptying continues uninterrupted; if not, the door, or pylorus, is hurriedly closed . . . until the portion tasted, is rendered acceptable.

This concept of the selectivity and sensitivity of the duodenum was confirmed later by other investigators.

It is not evident why duodenal ulcer, a lesion beyond the stomach, should alter gastric function so often and so strikingly. Gastric and duodenal ulcers cause alterations in gastric motor and secretory functions. The changes in motor function are utilized by the radiologist in his diagnosis of these lesions. The alterations in secretion as revealed by fractional analysis, though not diagnostic, frequently yield information exceedingly helpful in clarifying the clinical picture. In duodenal ulcer are also seen striking changes in gastric motor function that have long demanded explanation; these are the so-called secondary or indirect signs,[17] which consist of changes in gastric motility and evacuation and which may be explained as initiated by the direct irritant action of the lesion upon the local musculature or upon related nervous structures.[18] The symptomatology of duodenal ulcer is caused in large part by disordered gastric function in the form of both motor and secretory changes (hyperperistalsis, hypertonicity, hypermotility, and hypersecretion), although closure of the pylorus should also be considered.

Duodenal ulcer is usually situated in the most active area of the duodenal mechanism, the duodenal cap. This location of ulcer coupled with the associated duodenitis of the adjacent duodenum results in partial destruction of the mechanism or a rise in the threshold of response. The normal intrinsic brake upon gastric emptying is reduced. The natural result is rapid gastric emptying with increased gastric peristalsis and tonus, three motor phenomena well known in uncomplicated duodenal ulcer.[18]

Shay and Gershon-Cohen[16] were able to prove that adequate acidity in the duodenum can delay gastric emptying. The gastric hydrochloric acid utilized by them was shown to act as the intrinsic agent which stimulates a duodenal mechanism concerned with the inhibition of gastric emptying. The inhibition persists until the pH of the proximal duodenum is raised to that level at which activation of the mechanism ceases. There is then further gastric emptying, and the above process is repeated, resulting in the rhythmicity of gastric evacuation encountered in the normal individual.

It has been shown further that such an effect can be caused by agents other than acid. The mechanism in the duodenum may be activated by foods as well as by other substances capable of altering the physical or physicochemical conditions in the duodenum: for example, sodium chloride, sodium bicarbonate, glucose, fats, and fatty acids. Fats and fatty acids were found to be the most powerful stimulants of the duodenal mechanism.[19] The more intense the activator of the duodenal mechanism, the more marked is the pylorospasm and the more retarded is the gastric emptying. Stimulation of the duodenal mechanism produces not only pyloric closure and cessation of gastric peristalsis, but also diminution of gastric secretions, including acids, enzymes, and chlorides.[20]

The action of fat is particularly basic to an understanding of the prominent part played by milk and cream in the ulcer diet. Foods, in order to be able to activate the duodenal mechanism, must reach the duodenum in proper concentration or in proper form. There has been some question as to whether prolonged heating of fat causes a stimulation of gastric function, motor and secretory, instead of the expected inhibition. Friedlander and Grant[21] have shown that there is no increase in gastric acidity after the injection of heated fat into

the stomach; neither is there an appreciable decrease. This may be explained by the possibility that the fat does not reach the duodenum, or some fat reaches the duodenum and acts on the lower threshold mechanism (that is, to decrease gastric motility), which may result in reduced gastric motility only, but no alteration in secretion.

Stimulation of the duodenal mechanism by hydrochloric acid depends on the duodenal pH produced; salts and glucose require hypertonicity as a prerequisite.[17] The local physiologic actions of the various substances in the duodenum may be quite different, yet the gastric motor end result is the same in each, namely, delayed gastric emptying. When normal gastric acid is present, the regular stimulation of the duodenal mechanism is assured. When gastric acid is absent, as in achlorhydria, the intrinsic stimulus is missing; the normal rhythmicity of gastric emptying is lost when the ingested meal does not contain a suitable stimulus.

The most sensitive part of the duodenal mechanism, as previously described, is lodged in the duodenal cap. In view of this, the clinical fact that duodenal ulcer occurs in the cap in at least 95 per cent of cases becomes especially pertinent. With the development of the ulcerative process in this area and the associated duodenitis in adjacent portions of the duodenum, the duodenal mechanism concerned with gastric motor delay becomes impaired. The tonus, gastric peristalsis, and gastric evacuation are exaggerated when the normal brake is not acting efficiently, resulting in hyperperistalsis, hypertonicity, and rapid gastric evacuation seen so frequently in uncomplicated duodenal ulcer. It is of note that the duodenal mechanism is only dulled and not destroyed, because when healing of the ulcer occurs, the response of this mechanism may, and often does, become normal.[17]

Hyperacidity is a clinical term for which there is no real basis, since the concentration of acid in the parietal secretion remains constant. The clinical measurement of acidity by gastric analysis measures not the acid secreted by the parietal cells, but the end-result of several factors: rate of acid secretion, dilution and neutralization by the test meal, duodenal regurgitation, and also, in the case of clinical test meals, the rate of gastric emptying. The clinical observation that the acid titer in persons with ulcers in the pyloric canal probably does not differ from that found in duodenal ulcer patients may be based on a disturbance of the duodenal mechanism.[17] It may result from the extension of the irritation beyond the pyloric ring, producing a duodenitis and a depression of the duodenal mechanism concerned with the control of gastric secretion.

The cap is also the location of the most sensitive part of the duodenal mechanism concerned with gastric secretion. Ulcer at this site impairs the activity of the mechanism to such a degree that with an Ewald type meal the peak gastric acidity reached is usually inadequate to activate the obtunded duodenal mechanism.[17] Large or multiple lesions involving more of the duodenal mucosa, as well as the associated duodenitis, result in even greater involvement of the mechanism concerned with gastric secretion. Thus the development of the duodenal ulcer interferes with the normal duodenal mechanism that is concerned with the control of gastric acidity—the normal brake is impaired, and gastric acidity increases. Palmer[22] has stated:

> It seems remarkable indeed that after so many years of scientific enlightenment on gastro-intestinal matters that in ulcer disease the clinical focus should remain on the small lesion in the duodenum. This misses the point of ulcer disease because it really doesn't matter whether the crater is there or not. The crater comes and goes—not as the indication of disease, but in response to the disease. The patient isn't sick because he has an ulcer but has an ulcer because he is sick.

Having considered the mechanisms involved in the production of disordered motor and secretory function in duodenal ulcer, let us consider briefly how these disturbed functions are altered by ulcer therapy. Milk and cream have been and remain the mainstays of ulcer diet. If gastric hydrochloric acid and pepsin are important in the chronicity of ulcer, neutralization of acid and binding of pepsin become of paramount importance. For this purpose milk is an ideal food; its protein will bind pepsin, and its buffer action in neutralizing acidity has been amply demonstrated. As a gastric stimulant, milk calls forth a very low rate of gastric secretion, with the lowest acid and pepsin values of the common foods. Add to these effects the action of fat in the duodenum, and the special value of cream becomes apparent.[17]

In the last 30 years only a few investigators have discussed clinical syndromes involving the duodenum and the pancreaticobiliary tract. Bockus[23] and others have described "cholecystic periduodenitis"; Wilkie[24] has applied the term "cholecystoduodenal syndrome" to the clinical syndrome resulting in pain in the upper abdomen which often radiates toward the right costal margin or laterally, which may come on during or as soon as food is ingested and occasionally mimics closely the rhythm of duodenal ulcer, though in most instances complete relief does not follow the ingestion of food or the taking of antacids.

These investigators have postulated that the condition results from adhesive bands between the gallbladder, cystic duct region, or the undersurface of the liver near the gallbladder, and the pylorus and first or second portion of the duodenum. Although it is not so stated by these authors, it may be assumed that duodenitis with or without cap ulcer is the initial lesion. Bockus[23] states that acute duodenitis as a separate entity must be rare, while other investigators[25] have shown that duodenitis is quite common (and not associated with gastroenteritis).

In 1921, Judd reported his experience with a group of patients in whom the provisional diagnosis was peptic ulcer, but at operation there was shown instead a condition which he described as duodenitis.[23] Rivers analyzed the clinical data on 175

surgically verified cases of duodenitis, 74 of which were not associated with peptic ulcer.[23] It is implied that the majority of these patients presented themselves with symptoms suggestive of duodenal ulcer; however, in many of these patients the syndrome was less classical than that of duodenal ulcer, lacking the typical rhythmicity and periodicity. Nausea and vomiting were noted more often in these patients than in those with nonobstructing duodenal ulcer.

Since 1901, when Opie focused attention on the observation that acute pancreatitis could be produced by retrojection of bile into the pancreatic duct when the ampulla of Vater was occluded by a stone, with the production of a common passageway between the choledochus and the pancreatic duct, the investigations of many physiologists have been directed toward this problem. Archibald, in 1913, suggested that spasm of the sphincter of Oddi might produce sufficient temporary obstruction to enable bile to enter the pancreatic duct. Cholangiographic and kymographic studies on patients have since confirmed his opinion that the human sphincter of Oddi is a highly labile muscle.[26]

The duodenal wall varies from 3 to 12 mm. By contrast, the average length of the transduodenal segment of the common bile duct is 14 mm. The common bile duct in this location pursues a constantly curling or S-shaped course. The lumen of the common bile duct decreases in diameter as it crosses the duodenal wall. This duct unites with the pancreatic duct to form an anatomic common channel in 50 to 60 per cent of cases; however, only 5 per cent are so constructed that the common channel traverses more than 70 per cent of the papilla. It is only under this last circumstance that reflux of bile into the pancreatic duct can be expected. It is concluded, therefore, that simple reflux of bile into the pancreatic duct is not the initiating factor in the production of acute pancreatitis. Argentine investigators have demonstrated histologically and have concluded that the primary lesion is of vascular origin.[27]

If this is the initiating factor, it might also explain the observation that duodenal cap ulcer is associated with altered function of the pancreaticobiliary tract, noted by Lloyd[28] and described by Crowell[29] as a clinical triad. The intimate structural relationships of the common bile duct, gallbladder, and pancreas with the duodenal bulb may, by anatomic contiguity, serve to explain the clinical syndrome. Cap ulcer with associated duodenitis may result in extension of the inflammatory reaction with consequent vascular lesions, and reflexly initiate aberrations in function of the pancreaticobiliary tract. Concomitant alterations in the duodenal mechanisms controlling gastric emptying and secretion would serve further to compromise pancreaticobiliary function. Increased intraluminal pressure within the duodenum, as demonstrated above, would also serve to explain, in part at least, dyssynergia of the ductal system.

The duodenum continues to be one of the "unconquered physiologic frontiers"[1] of medicine. Current investigations utilizing intestinal biopsy capsules should increase tremendously our knowledge of the duodenum.

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Clinical experience with nephrotomography

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A frequent roentgen problem is that of evaluating mass lesions of the kidney; generally the differential diagnosis rests between renal cyst and renal tumor. The problem usually arises when intravenous or retrograde pyelography demonstrates a mass deformity of the renal outline or deformity of the renal collecting system.

Several roentgenographic approaches have been utilized in the study of such cases. Retroperitoneal air studies with or without simultaneous laminography are of help in determining the presence and extent of masses deforming the renal outline, but not in the further problems of differential diagnosis. Renal arteriography by translumbar aortic puncture or intravenous methods have been and are still being used, but considerable question has been raised concerning the safety and diagnostic reliability of arteriographic studies. On the other hand, recent experience has demonstrated that nephrotomography will safely and reliably distinguish between renal cysts and renal tumors. This procedure is described and discussed below, and ten illustrative cases are reported.

Method

The principles employed in diagnosis by nephrotomography rest on the fact that if one rapidly floods the venous system with a large concentration of urographic medium, the renal parenchyma will become opacified. This does not happen during ordinary intravenous urography, because of insufficient dye concentration, although frequently a mild nephrographic effect is noted. Basically a renal cyst is characterized by the appearance of a sharp circular radiolucency surrounded by opacified parenchyma. Tumor tissue, however, is at least as densely opacified as the surrounding normal parenchyma. The technic used in our studies is that described by John A. Evans,[1] whose name is identified with the development of this procedure.

By means of a 12-gauge Robb-Steinberg angiocardiographic needle, 30 cc. of 50 per cent Hypaque are injected intravenously. Although this injection is not an essential portion of the examination, it does provide the basis for opacification of the renal collecting system so that this may be noted simultaneously with the nephrographic films taken later. It also serves to reinforce somewhat the later nephrograms. Next, the arm-to-tongue Decholin circulation time is determined. Ten minutes after the first injection, 50 cc. of 90 per cent Hypaque are administered through the Robb-Steinberg needle in 2 seconds or less. At the previously determined arm-to-tongue circulation time, a film of the renal areas is taken. Or, one may incorporate 5 cc. of Decholin in the Hypaque injection and expose the film either at the initially determined arm-to-tongue circulation time or when the patient can taste the Decholin, which may occur sooner because the patient is now more accustomed to the sensation of a bitter taste. As soon as possible thereafter, three laminographic sections of the kidneys are made, one at the center of the kidney and the others 1 cm. above and below this level.

Case reports

The following cases have been selected to illustrate the uses of nephrotomography.

Case 1 • A middle-aged woman entered the hospital because of an attack of acute right-sided ure-

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Fig. 1

Fig. 2

teric pain. Similar attacks had occurred five times in the past 2 years, and intravenous urograms performed at several institutions had been reported as diagnostically unrevealing. Figure 1 shows an obvious mass producing a bulge in the upper right lateral renal margin with some associated flattening of the superior minor calyces. The differential diagnosis lay between renal cyst and renal tumor. A typical nephrotomographic section (Fig. 2) reveals the region of the mass to be occupied by a circular radiolucency. The smooth spherical margins of the lesion and the marked contrast between its radiolucency and the surrounding opacified renal parenchyma are striking. This is characteristic of the appearance of a renal cyst in nephrotomography.

Case 2 • The patient was a middle-aged man with right-flank pain and hematuria. Papanicolaou smears of material obtained via ureteral catheterization were reported as indicating malignancy. Examination revealed a mass lesion (Fig. 3) at the lower pole of the right kidney and some rotation of the right kidney about its horizontal axis. There was an associated deformity of the renal collecting system, consisting of flattening and elongation of the calyces surrounding the mass. The nephrotomographic section illustrated in Figure 4 again revealed a circular radiolucency having the characteristic appearance of a renal cyst.

Comment • Evans,[1] in reporting a large series of cases at the New York Hospital, estimated that his method was 95 per cent accurate in differentiating simple cysts and neoplasms of the kidney. It has been stated[2] that 7 per cent of serous or clear renal cysts show neoplastic proliferations in their walls. In a review of 230 cases of renal cysts in the radiologic literature,[3] no such case was encountered. It has been estimated that 25 per cent of hemorrhagic renal cysts harbor malignant elements. However, these cysts represent only 0.25 per cent of all renal cysts.

Fig. 3

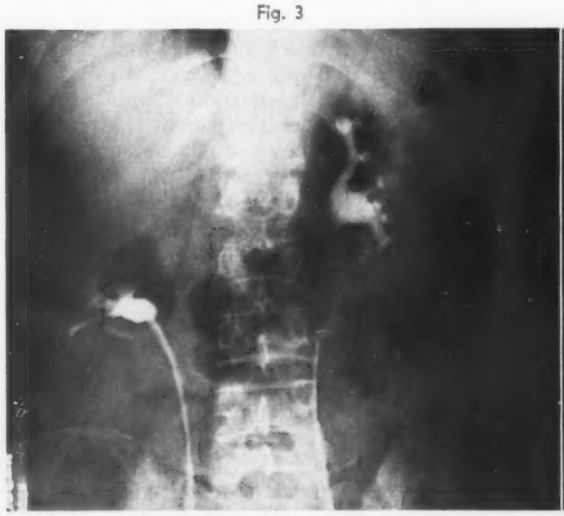

Fig. 4

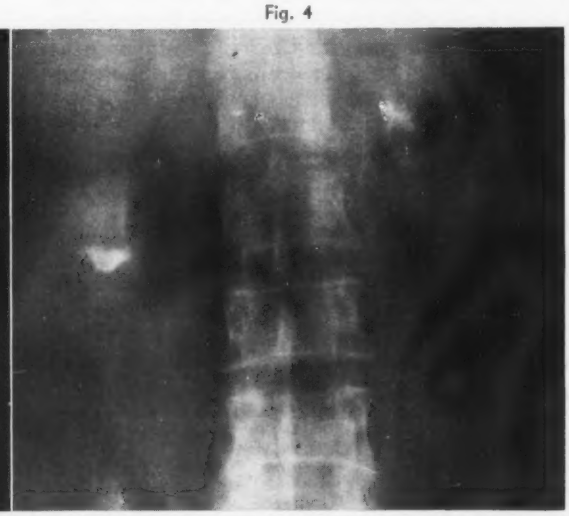

Fig. 5

Fig. 6

Case 3 • A middle-aged man reported a history of vague left-flank pain for several months. Figure 5 shows the appearance of the kidney at the time of intravenous urography. A large mass can be seen at the lateral aspect of the left kidney, producing gross deformity of the collecting system. Again the differential diagnosis rested between renal cyst and renal tumor. In Figure 6, one can see that the area containing the mass has opacified as densely as the surrounding renal parenchyma. This is a characteristic finding of renal tumor and is a manifestation of its vascularity.

Case 4 • Again the patient was a middle-aged man with a history of vague pain for several months; in this case the pain was in the right flank. Retrograde pyelography (Fig. 7) revealed a large mass, apparently involving the entire right kidney, as indicated by the evident deformity of the collecting system. Nephrotomography (Fig. 8) was performed, and homogeneous opacification of the tumor area was demonstrated, again a characteristic finding of malignant change. The outline of the left kidney is clearly delineated in Figure 8, but the renal margin on the right cannot be seen. This is understandable in the light of the surgical finding of a hypernephroma which had infiltrated widely into the perirenal tissues.

Case 5 • A middle-aged woman was referred to the X-ray Department for an intravenous urogram because a large "cystic" left kidney had been palpated at the time of pelvic surgery. In Figure 9, one notes a bizarre appearance of the left renal collecting system associated with a slight bulging of the midlateral renal outline. The nephrotomogram (Fig. 10) reveals homogeneous opacification of the major portions of the left renal parenchyma associated with areas of increased opacification. This is again characteristic of renal carcinoma. The area of increased opacification is a manifestation of the hypervascularity of the tumor. On the original roentgenograms, small scattered areas of radiolucency were noted throughout the left kidney (not to be confused with superimposition of overlying intestinal gas). Examination of the excised kidney revealed these to represent areas of cystic tumor degeneration. A mistaken diagnosis of renal cyst should not occur when one notes radiolucency within a degenerated area of malignant change,

Fig. 7

Fig. 8

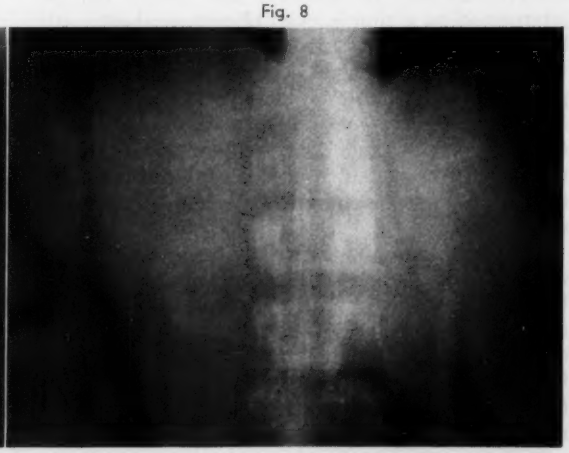

Fig. 9

Fig. 10

since the radiolucent areas in this instance will have irregular margins, in contradistinction to the clearly spherical outlines of a renal cyst.

Earlier it was stated that the first film in the nephrotomographic series is taken at the arm-to-tongue circulation time. This is done in an attempt to secure an intravenous arteriogram, which may be helpful in further substantiating the nephrotomographic impression. Figure 11 indicates the charactertistic tumor stain that was obtained in this case.

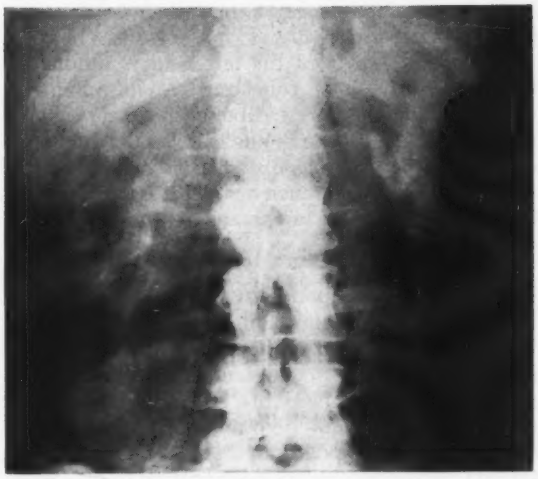

Fig. 11

Fig. 12

Comment • Although many enthusiastic claims are made for renal arteriography,[3] some experienced radiologists admit to a diagnostic error as high as 33⅓ per cent in the evaluation of renal arteriograms. Interpretation rests on the fact that since a cyst is avascular, the vessels that normally traverse the area will be absent in the roentgenograms. A tumor shows hypervascularity, and in addition the vessels are tortuous and variable in size. Small puddles of dye may be present, a characteristic sign believed to be the result of small arteriovenous fistulas. If the tumor has undergone cystic degeneration, as often happens, a large area of avascularity may be revealed that should not be interpreted as a simple cyst. Hypervascularity will be seen peripherally. Errors have also been made when renal cysts did not occupy the entire anteroposterior diameter of the kidney. The supine film is only two-dimensional, and an area of avascularity may not be appreciated if normal vessels travel anterior or posterior to it. It becomes important, therefore, to examine carefully the number of renal vessels present.

Nephrotomography carries with it the proved safety of intravenous angiography. On the other hand, although figures vary, it is felt by many that a significant incidence of serious complications may occur during or after abdominal aortography. These include temporary or permanent loss of renal function, transverse myelitis or paraplegia, cardiac arrest, acute coronary occlusion, thrombosis of the superior mesenteric artery, and dissecting aneurysm. The more recent utilization of an improved technic for intravenous arteriography is a much safer procedure than translumbar aortic puncture,

Fig. 13

Fig. 14

but its true value in diagnosis remains to be assessed.

Case 6 • Intravenous urography in the case of a 56-year-old patient with vague abdominal pain revealed a mass in the upper pole of the left kidney (Fig. 12) associated with depression of the renal collecting system. The intravenous renal arteriogram and the nephrotomogram, reproduced in Figures 13 and 14, show the charactertistic tumor stain of neoplasm associated with increased opacification of portions of the left renal tumor.

Case 7 • Retrograde pyelography performed on a 63-year-old man revealed (Fig. 15) marked deformity of the left renal collecting system. The nephrotomogram which is reproduced in Figure 16 demonstrates homogeneous opacification of the renal parenchyma, again characteristic of malignant change.

A nephrotomographic error to be avoided is illustrated in Figure 17. This is a combined nephrotomogram and retroperitoneal air study. The spherical shadow with a radiolucent center that is present beneath the left diaphragm is a pseudotumor produced by the gastric fundus. It is a relatively frequent finding and should not be mistaken for a mass lesion.

Fig. 15

Fig. 16

Fig. 17

Fig. 18

Case 8 • A 51-year-old man was examined because of ureteric pain on the right side. Intravenous urography revealed decreased function of the right kidney (Fig. 18), and amorphous material was removed from the right ureter. On the left side, however, there was evidence of incomplete filling and a somewhat bizarre appearance of the collecting system. Retrograde pyelography (Fig. 19) revealed right pelvicalyectases and again showed deformity of the left renal collecting system, with multiple filling defects. At least some of the defects were thought to represent blood clots within the renal pelvis. Several months later, intravenous urography (Fig. 20) revealed a normally functioning right kidney and a normal right renal collecting system. Satisfactory function was also present on the left side, but further investigation of the left renal collecting system by means of retrograde pyelography demonstrated a filling defect of one of the superior minor calyces (Fig. 21). A nephrotomogram (Fig. 22) showed homogeneous opacification of the renal parenchyma. Pathologic examination following a left nephrectomy revealed a polypoid adenocarcinoma arising in the left superior minor calyceal area.

Comment • A similar case has previously been described in the literature. No such case involving nephrotomography has been described since. In the earlier case, the diagnosis was not made preoperatively. In retrospect, it was felt that the combination of a calyceal filling defect and a normal nephroto-

Fig. 19

Fig. 20

Fig. 21

Fig. 22

mogram should suggest the diagnosis. This is the first reported case of papillary adenocarcinoma diagnosed preoperatively with the aid of nephrotomography.

Summary

Nephrotomography is a valuable supplementary procedure for the differential diagnosis of renal cysts and renal tumors. How this is accomplished and the technic of nephrotomography are described, with illustrative cases.

One of the cases studied represented the first preoperative diagnosis of renal adenocarcinoma by means of nephrotomography.

I am indebted to Dr. Leo Sheiner for his assistance in preparing the roentgen reproductions for this paper.

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Forequarter and hindquarter amputation

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Such radical and mutilating procedures as forequarter and hindquarter amputations may be considered when a patient's life is waning, and when no other known mode of therapy will eradicate the disease. This operation, together with such adjunctive measures as irradiation, will often result in palliative relief and occasionally in cure of malignant disease.

Forequarter amputation

The term "forequarter amputation" implies complete ablation of the upper extremity with the shoulder girdle. The operation is more correctly termed primary forequarter amputation, in contradistinction to secondary forequarter amputation, which may involve resection of the initial local tumor, resection of the upper end of the humerus, scapulectomy, amputation through the upper arm, or disarticulation of the shoulder.

Historical note • In 1887 Paul Berger published a monograph giving full details on all phases of this subject. The first forequarter amputation was traumatic, and it occurred in 1737; the patient, who was treated at St. Thomas Hospital in London, was a miller whose arm had become entangled in a mill wheel. He suffered evulsion of the whole limb and scapula and, of course, amputation. Recovery was uneventful. This demonstrated that the human body could survive the shock of a major amputation.

The first surgical removal of the forequarter is attributed to a young English naval surgeon, Ralph Cuming; his patient was treated for a gunshot wound, in 1808.

In 1836, Dixi Crosby, an American surgeon, first removed the entire arm, scapula, and three fourths of the clavicle for a malignant growth. In the following year, Reuben D. Mussey performed the first claviscapulectomy for a recurrent chondroma. Credit is given to James S. Syme for performing the first total scapulectomy for tumor.

These early pioneers of radical amputation deserve great praise for working against such heavy odds in days when there was no anesthesia, knowledge of aseptic technic, chemotherapuetic agents or antibiotics, blood transfusions, or x-ray therapy. Today, with great advances in these matters, as well as in surgical technic, such major procedures can be safely performed. If cases are properly selected and the procedure is well chosen, the result will undoubtedly be relief or cure, prolonging the life of the patient.

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Such radical and mutilating procedures as forequarter and hindquarter amputation may be considered when a patient's life is waning, and when no other known mode of therapy will eradicate the disease

Indications • In the case to be described here the indication was an osteogenic sarcoma of the right proximal humerus without early evidence of distant metastasis. Other specific indications are primary lesions produced by trauma, infection, or neoplasms, or the sequelae of these processes.

In causes of trauma following gunshot wounds, automotive accidents, savage animal bites, and physical trauma such as thermal, electrical, or chemical burns, the situation must be carefully evaluated. Often a sudden decision must be made to perform a forequarter amputation in order to save a life.

The presence of serious infection in the upper extremity is rare at present, because of the availability of wide-spectrum chemotherapeutic agents. The foremost indication for amputation is neoplastic disease, including carcinoma and melanoma of the upper limb with axillary metastasis.

In one study,[1] sarcoma of the soft tissue of the shoulder region was the most frequent indication for amputation, accounting for 53.4 per cent of 88 cases. Carcinoma of the breast, gross lymphedema, and pain in the upper limb constituted the second commonest indication, occurring in 37.5 per cent of cases. Sarcomata of bones of the shoulder girdle were least frequent, comprising 9.1 per cent of cases.

The choice of operation is difficult, and in such conditions survival for long periods is unlikely no matter what procedure is used. In the series of Pack and Ariel[1] there were no 5-year survivals even with the major procedure. However, it was found that freedom from local recurrence was highest with the major procedure. Scapulectomy affords little hope in sarcoma except for chondrosarcoma. Patients with certain types of sarcoma should also be treated with radiation both preoperatively and postoperatively.

Preoperative preparation • Adequate preoperative studies are of paramount importance in choosing an operation and insuring its success. A full x-ray survey, including the involved extremities, general skeletal studies, and complete lung studies, is the *sine qua non* of treatment choice. Skeletal and pulmonary metastases would generally preclude radical treatment. Thorough physical examination, including lymph node palpation, is essential.

Every effort should be made to determine whether the neoplasm is primary or secondary. It is somewhat controversial whether closed or open biopsy should be used; in our cases, open biopsy was the method of choice.

Routine hematologic and electrolytic studies should be performed on admission and repeated at intervals for therapeutic and prognostic significance.

Preoperative transfusions may be necessary to maintain a blood hemoglobin above 80 per cent. A minimum of 1,500 cc. of whole blood should be made available for use at the time of operation.

Antibiotics should be administered preoperatively and discontinued 1 week postoperatively; agents most commonly used are penicillin and chloramphenicol.

Operative procedure • Endotracheal intubation is required, with general anesthesia.

The patient is placed in a semisupine position while an assistant maintains elevation of the extremity for proper asepsis. Shoulder elevation is obtained by use of padding. The involved extremity is prepared and left free for easy mobilization of the shoulder region and for facilitating the anterior and posterior dissections.

In the case reported here, we used the anterior approach developed by Berger. In order to use any procedure, however, it is important to understand the complex anatomic arrangement of blood and nerve components of the shoulder girdle.

Two incisions are necessary, the first being superoposterior, and the second being anteroinferior. The first incision is made along the length of the clavicle in a racquetlike fashion. The second is made to extend from the medial end of the clavicle to the anterior border of the axilla. After exposure of the body of the clavicle, the periosteum is incised along its entire length.

At this point resection of the entire clavicle, beginning at the sternoclavicular joint, will afford better exposure of the subclavian vessels and enable one to easily locate and ligate the suprascapular and transverse cervical vessels. However, this is also attended by the danger of air embolism and injury to the pleural dome and thoracic duct. In our case it was elected to resect the clavicle at the proximal third with a Gigle saw. Satisfactory visualization of the subclavian vessels and neurovascular bundle was observed with this method.

The subclavian artery is divided, as is its accompanying vein; both are ligated with two black silk transfixation sutures. Then the anteroinferior skin incision is carried down in a racquetlike fashion to the anterior border of the axilla.

The arm is then swung back and the pectoral muscles are divided, thus exposing the brachial plexus. After division and ligation of this plexus,

we injected 95 per cent absolute alcohol into the proximal stump. The arm is brought forward again, and the muscles of the vertebral margin of the scapula are divided. With the scapula free, the amputation is completed. Black silk suture was used to approximate the skin in our patient, and no drains were used.

Variations in technic have been proposed; however, I feel that the procedure as described is relatively simple, or at least was in our patient.

Postoperative care • In our case the postoperative course was uneventful; the wound was completely healed in 10 days and the patient was discharged from the hospital with adequate psychologic adjustment. Perhaps the mental state was aided by the tranquilizers which were prescribed.

The problems of fitting clothes is dealt with in 2 or 3 months, when the patient is sent to a brace maker for fitting a light plastic shoulder cup or dress prosthesis. Prosthetic function is minimal; the device is used merely for cosmetic purposes.

A program of rehabilitation is necessary to avoid future body deformity. With the loss of the weight of the entire shoulder girdle, one must guard against secondary atrophy of muscles incident to loss of function and the overdevelopment of the opposite limb. Because the "swing of the arm" is lost, normal rhythm of gait is disturbed; this may result in curvatures of the upper trunk.

The wide scope of physical rehabilitation for the upper extremity amputee will not be discussed here. However, in principle, it is necessary to realize that when one of the most valuable functional tools of the body has been lost, the patient must learn again to care and provide for himself. This requires altering the habit patterns of a lifetime. He must relearn the most ordinary tasks and many special skills with only one hand. It is necessary that the patient have all this explained to him so that he can cooperate with the surgeon and physical therapist.

Unfortunately, a common postoperative complication is distant metastasis of the malignant disease. In our case, this occurred about 3 months postoperatively; it was represented by pulmonary metastasis with rapid bilateral dissemination and subsequent liver damage.

Advantages of the radical operation • There are several advantages to be gained by performing a forequarter amputation instead of more conservative operations, even in face of the often guarded prognosis. These are:

1. The lymphatics and veins are removed at a much higher level.
2. The shoulder muscles with their natural fascial planes are entirely removed, thus circumventing the invasive tendency of certain tumors.
3. Dissection of the axilla is easily accomplished.
4. The mortality from the operation is no greater than with other procedures; this furnishes proof of its safety.

Forequarter and hindquarter amputations . . . together with such adjunctive measures as irradiation, will often result in palliative relief and occasionally in cure of malignant disease

5. Wounds heal more satisfactorily because of the elimination of all dead spaces.
6. Deformity is easily overcome by use of prosthetic appliances.
7. Forequarter amputation is performed in many cases following a disarticulation of the shoulder for recurrence of a malignant tumor in the stump. One might ask about the advisability of such a radical procedure when a malignant neoplasm first presents itself in the hand, wrist, or forearm. As a rule of thumb, the level of amputation can best be determined by the character of the tumor and its incidence of rapid metastasis. In the upper extremity, there might occasionally be a justification for a below-the-elbow amputation; however, by doing the more radical procedure, the anticipated improvement in cure rate exceeds the slight advantage to be gained by preserving the shoulder girdle or part of the humerus.

Illustrative case • This girl was 13 years old when she was admitted to the Hospitals of the Philadelphia College of Osteopathy, on July 30, 1958. The complaint at that time was pain in the right shoulder with swelling and restricted motion. This had begun in April 1958 and had been mild until June of that year. Swelling had begun on July 17. At that time the patient had sought the advice of a physician who had treated her and provided some relief. Again on July 30 further treatment had been obtained. At that time hospitalization was recommended.

The only trauma noted was that the patient's father had struck her on the right shoulder on several occasions. Past personal and family history was essentially noncontributory. Two grandparents had died of carcinoma, but both parents were living and well.

The only remarkable physical finding was the palpable mass on the proximal right humerus which was markedly tender to touch.

Roentgenographic studies taken that same day showed evidence of extensive pathologic change in the shaft portion of the right humerus with appar-

ent extension of the disease to involve the capitate epiphysis. However, involvement was mainly in the shaft or diaphysial limits of the humerus, extending from the epiphysial fissure dependently for some 11 cm. Irregular medullary and cortical lysis was accompanied in some areas by sparse formation of new periosteum. At the proximal shaft region, below the epiphysial cartilaginous fissure, cortical distribution was seen, with marked extension of the tumor into the soft parts. The regional scapula and clavicle did not appear to be affected at this time. Definite evidence of pulmonary, pleural, or mediastinal metastasis could not be noted, and the other skeletal parts examined offered no evidence of gross neoplastic changes.

The hemoglobin and hematocrit levels were normal. There were 9,300 leukocytes per cu. mm., with a differential count of 2 per cent eosinophils, 3 per cent stab cells, 76 per cent segmented neutrophils, and 19 per cent lymphocytes. The sedimentation rate (Westergren method) was 50 mm. per hour. Urinalysis was essentially normal. However, a 24-hour study of urinary calcium (Sulkowitch method) was plus 3, both on an original and a recheck test.

On August 1 biopsy of the tumor mass was carried out. Grossly it was a white mottled tumor with a tense covering, and with no rigidity of the surrounding musculature. A wedge-shaped portion of tumor tissue was resected; heavy bleeding was encountered, which indicated a highly vascular growth. The pathology report, dated August 4, described several firm reddish-tan portions of tissue, all with a similar histologic configuration. The stroma was cellular and composed of oval, spindle-shaped, and polyhedral cells with an occasional tumor giant cell noted. Nuclei were hyperchromatic and showed occasional bizarre mitotic figures. The intercellular substance was osteoid and it appeared to be collagenous in nature. There was an occasional focus showing atypical cartilage formation. Vascularization was good, and very little degenerative or necrotic material was noted.

The diagnosis was then made of osteosarcoma of the right upper extremity, class III. On August 7 a right forequarter amputation was performed, and 1,500 cc. of whole blood were restored.

On August 8 the hemoglobin and hematocrit values were within normal limits. There were 11,700 leukocytes per cu. mm., with 2 per cent juvenile cells, 1 per cent stab cells, 74 per cent segmented neutrophils, and 23 per cent lymphocytes.

On August 11, the alkaline phosphatase was 6.31 units, and the inorganic phosphorus was 4.45 ml. per 100 cc. A Sulkowitch test for urinary calcium taken on August 15 was 3 plus.

On August 18, the patient complained of phantom pain, with a sensation of holding a block of wood in the right hand. X-ray findings on that day showed the tissue to be normal in the area. The patient was discharged ambulatory and in good condition on August 21.

On September 22 the patient returned to the clinic for re-examination. At that time she complained of a slight cold and cough. X-ray studies of the lung revealed a rounded nodular lesion about 1.3 x 1.5 cm., in the upper right lobe of the lung. This was considered to represent metastasis. There was no evidence of pneumonitis or other inflammatory disease. The patient was treated palliatively at that time. Roentgenograms taken on November 10 revealed bilateral pulmonary metastasis.

The patient was seen again on December 1. At that time, she had no complaints. The incision was noted to be well healed and there was no slough or breakdown. Laboratory tests at that time showed the alkaline phosphatase to be 17.1 units and phosphorus to be 4.3 mg. Calcium was at 4.6 mEq. and 9.2 mg. A Sulkowitch urinary calcium test was plus 1. A slight anemia was also noted.

On December 15, the patient's temperature was elevated to 101 F, and some hemoptysis was noted. She was rehospitalized 2 days later and nitrogen mustard therapy was begun. She reacted violently with nausea, vomiting, and emotional disturbance.

On December 23, the patient was discharged for the Christmas holidays. She was readmitted on December 30 with a chief complaint of dyspnea, hemoptysis, and generalized weakness. The alkaline phosphatase continued to rise, to 30.9 units, and the patient followed a progressively downhill course. She died on January 29, 1959, of respiratory failure.

Hindquarter amputation

Another radical operation is the hindquarter amputation. This is also known as hemipelvectomy, interpelvia-abdominal amputation, interiliosacropubic amputation, transiliac amputation, interinnominoabdominal amputation, disarticulation of the innominate bone, and sacroiliac disarticulation. The term "hindquarter amputation" designates a complete removal of the lower extremity, corresponding buttock, and entire innominate bone in one stage.

Historical note • The first successful hemipelvectomy was done by Alfred C. Girard in 1895, according to one author. In another account Theodor Billroth is credited with using the procedure for the first time, in 1889.[2] The principles of the procedure were laid down by a Scottish surgeon named James Hogarth Pringle in 1916, when he reported 4 cases of his own. Twenty-five more cases were reported from 1916 to 1942, and in the period from 1943 to 1953, 46 additional cases were added by Pack and Ariel.[1]

The procedure was performed at Metropolitan Hospital in Philadelphia in 1957 on a 47-year-old man who had a large fungating lymphangiosarcoma in the right hip joint.

Indications • Fortunately, the indications for this procedure are few. They are generally similar to those described for forequarter amputation. In addition, the procedure is sometimes useful in advanced hopeless cases when the patient is bedridden and foul-smelling. The procedure can elimi-

nate sepsis and pain and restore comfort and partial activity.

The procedure has been applied for malignant tumors of the soft tissues and bones, chronic osteomyelitis of the pelvis or proximal portion of the femur, massive cartilaginous tumors of the innominate bone, and dissecting aneurysm of the femoral artery.

Cases should be chosen after routine investigation by careful physical, roentgenographic, and endoscopic examination. Wide extension of a neoplasm should not necessarily deter the surgeon from performing the operation.

An alternative procedure called the modified hemipelvectomy may be useful. This relatively easier and less deforming procedure is used when a major portion of the ilium and pubic symphysis are not diseased. Salvaging a leaf of the ilium and pubic rami permit better prosthetic adjustment. Shock and morbidity are minimized. This procedure is preferred over disarticulation of the hip joint to reduce the problem of recurrence of tumor. It is a procedure definitely to be considered in selected cases.

Preoperative preparation • Preoperative considerations supplementing those mentioned previously for upper extremity amputation are as follows:

1. Thorough cleansing enemas are given the night before operation until the return is crystal clear.
2. In women a vaginal douche is administered, using aqueous Zephiran solution.
3. Catheterization of the ureter is performed before operation; this may be helpful during pelvic dissection.
4. A minimum of 2,000 cc. of whole blood should be made available in the operating room.
5. A cut-down is performed and intravenous polythylene tubing is inserted.
6. As a further aid in preventing shock and conserving circulating blood volume, an elastic bandage is carefully applied to the lower extremities several hours before operation.
7. In open infected lesions one can lessen the incidence of postoperative wound infections by daily local antisepsis, adequate gentle debridement, and proper administration of antibiotics or chemical agents to which cultured organisms are found sensitive.

Operative procedure • In the patient treated at Metropolitan Hospital, both general and spinal anesthesia were used.

The patient is positioned in a semisupine position supported by a kidney rest with the involved lower extremity lying free. The anus is closed with a purse-string suture. In the male the penis and scrotum, if not involved, are sutured to the opposite aspetically prepared inner thigh. The operation then proceeds as follows.

An incision is made over the center of the right inguinal ligament and is carried through the subcutaneous tissues to the deep fascia, down to the right external iliac vessels. These are doubly clamped, transected, and ligated with no. 1 chromic catgut suture. The peritoneal contents are retracted, as is the bladder. The ureter on the right is identified and retracted to the left. In our patient the right spermatic cord was found to be involved; it was transected and dissected back to the scrotum, and the right testicle was removed.

The incision is then carried inward across the thigh, swinging upward across the posterior surface to the base of the greater trochanter and then around to the starting point.

Dissection is then carried down to the pubic symphysis. The leg is abducted and the adductor and pectineus muscles are severed. The periosteum is scraped off the right pubis and, by hammer and chisel, the symphysis is separated. The incision is then carried around the glutei, obturator, gemelli, and iliopsoas muscles. The obturator and sciatic nerves are severed, ligated with linen, and then injected with Novocaine. The hamstrings are then severed from the ischial tuberosity. A Gigli saw is introduced along the right sacroiliac joint, and the ilium is separated at this point. By this maneuver the whole hindquarter is removed. In our case hemostasis was obtained by using electrocautery.

It is important to remember that the abdominal contents are merely supported by skin, subcutaneous and fascial tissues, and peritoneum, yet no instance of herniation of abdominal contents has occurred in normal individuals. Therefore, there is no need to preserve the gluteus maximus since it does not make for a better stump; furthermore, there is a possibility of leaving behind malignant tissue in an intact gluteus muscle.

Careful preoperative evaluation and screening are essential, especially in cases of malignancy, in order to detect metastatic lesions. Direct metastasis or extension of the primary tumor beyond surgically correctable limits calls for conservative measures; hence major amputation should be undertaken only if symptomatic relief is anticipated

Postoperative care • In our patient, the postoperative course was somewhat stormy. The patient developed anemia, spiking temperatures, and a

wound infection. Ordinarily, however, aside from distressing phantom limb pains, a satisfactory postoperative course is usually expected. Abdominal distention is common; it is probably due to retraction and manipulation of the peritoneal contents. This did not occur in our patient; possibly it may be avoided by gentle retraction during operation and by immediate treatment once it begins by adequate intubation and the use of parasympathomimetic agents. During the first 48 to 72 hours postoperatively, fluid and electrolyte balance must be maintained. Hypoproteinemia is not too uncommon, and it should be corrected by use of large amounts of plasma.

Inability to void because of paresis of the urinary bladder occurs often, but this is only temporary; normal function is usually restored in 4 to 7 days. A Foley urethral catheter is used postoperatively, followed by tidal drainage for 4 to 7 days. This method is beneficial for use in an atonic bladder, and it prevents dressing soilage.

Postoperative drainage may be profuse. Such was the case in our patient; however, it was adequately controlled. If the blood supply has been devitalized by heavy irradiation of the pathologic site, every effort should be made to excise all of the irradiated skin; otherwise delayed healing or nonhealing is inevitable.

Anemia was encountered in our case. The blood status is usually brought within reasonably normal limits by proper preoperative measures, which are continued throughout the operation and followed carefully during the immediate postsurgical phase. Satisfactory anal sphincter control is usually preserved following this procedure despite complete division of the levator ani muscle on the affected side. This may be attributed to the cross insertion of these muscles. The preserved sphincter and intact contralateral levator ani muscles are wholly adequate.

The ultimate goals of postoperative care are psychologic adjustment of the patient, adequate prosthetic fitting and training, and intensive rehabilitation. Since an artificial limb must substitute for the normal leg, it is evident that the prosthesis must serve to maintain the weight of the body in balance and provide it with locomotion. It must also approximate the form of the normal limb for cosmetic purposes and have something of the ease of normal motion.

The time for an amputee to be fitted with an artificial appliance is variable, but here are some criteria to be fulfilled:

1. Sound healing of all surgical and traumatic wounds. An immature scar when subject to pressure or friction will usually break down and develop keloids.

2. Freedom from pain at the amputation stump. Nerve irritability will be aggravated by fitting and may result in pain fixation.

3. Normal circulation as evidenced by absence of edema, discoloration, or coolness. An area with poor circulation, when subjected to the restrictive influence of the socket of the prosthesis, may become seriously impaired and result in tissue slough and disturbance of the amputation stump.

It is usually found that 8 weeks are sufficient time to elapse before prothestic fitting following forequarter amputation, and 12 weeks following hindquarter amputation.

Illustrative case • A 47-year-old white man was admitted to Metropolitan Hospital on July 1, 1957, because of pain in the right hip and right lumbosacral area, which radiated down the right lower leg to the ankle. There was a fungating mass on the right anterolateral surface of the right hip joint. This mass had first been noticed by the patient in 1954; an operation had been performed the same year for its removal. Recurrence had been evident in March 1956, and the patient went to the Hoxsey Clinic in May of that year for treatment. There had been no definitive results. In February 1957 the mass had begun to grow, and the patient had returned to the Hoxsey Clinic for a second course of treatment. Other than these facts the past history was not contributory, nor was the family history.

The physical examination showed the patient to be pale and moderately well-nourished. His pulse rate was 120, and his blood pressure was 140/86. The inguinal lymph nodes on the right side and the cervical lymph nodes were palpably enlarged. The thyroid gland was enlarged, diffuse, and firm. A grade I pitting edema was evident on both lower extremities, and dryness and scaliness were also noted. Examination of the perineum and rectal area was difficult because of the enlarged mass on the right thigh. The patient stated that is was difficult to walk because of the weight of the mass and the continuous pain.

A complete blood count showed the patient to be anemic; his hemoglobin was 8.5 grams (55 per cent) and hematocrit reading was 30 per cent. The sedimentation rate was 31 mm. per hour.

On July 3 the hemoglobin was up slightly to 8.75 grams (67 per cent), and hematocrit reading was 37 per cent. Other tests had essentially normal results.

Biopsy of the tumor mass was carried out on July 2. The pathologist reported that one portion of the tissue represented soft gelatinous myxomatous tissue, while two other sections were necrotic and hemorrhagic and displayed no gross identifying features. Necrosis was prominent all through the tissue samples, making microscopic examination difficult; however, in one small fragment an area suggestive of lymphangiosarcoma was found. There was some tissue which appeared myxomatous, but it was thought that this might be secondary to the primary lesion.

On skeletal x-ray examination there was no evidence of osseous destruction. The soft tissue mass was visible. The lungs showed evidence of a small rounded opacity within the lower left lung field which suggested a metastatic lesion.

The patient's family was advised of the gravity

of the situation, and that the possibility of cure was remote. Information was also given that radical intervention was necessary for control of the tumor and palliation from pain, and to prolong the patient's life.

The operation was performed on July 8. The procedure took 2 hours and 20 minutes, during which time the patient was given two units of whole blood. This was in addition to five units which had been administered from the date of admission until the time of operation in hope of correcting the persistent anemia.

The gross findings were of a tumor occupying an area 12 inches long over the side of the right hip joint, extending along the right inguinal ligament, covering the entire external iliac fossa, and invading the right sacroiliac joint. There were enlarged lymph glands over the right iliac vessels. Microscopic evaluation showed that the cellular components were characteristic primarily of sarcoma, possibly a lymphangiosarcoma or angiosarcoma. There was a lipomatous component which was not believed to be a primary portion of the tumor.

The pathologic diagnosis was fungating lymphangiosarcoma of the right lower extremity and pelvis.

During the postoperative period the patient received three additional units of whole blood. A spiking fever developed; this was controlled by use of 250 mg. of tetracyline four times daily. He had received penicillin prophylactically twice daily before the operation. On the seventh postoperative day Coley's toxin was administered in doses of 0.5 minim; this was increased daily by 0.5 minim until the maximum dosage was obtained.

During redressings it was noted that the drainage was minimal, until the eleventh postoperative day when it became profuse. Smears and cultures received revealed that the infecting organism was Bacillus coli, and that it was sensitive to chloramphenicol and streptomycin. Chloramphenicol treatment was started, and this seemed to control the infection. Drainage diminished, and the temperature was restored to normal.

The Foley catheter was removed on the fourth postoperative day. With conservative treatment, proper elimination was once again established.

On the eleventh day the patient was permitted to sit in a wheel chair.

Ambulation with a walker was allowed on the sixteenth day. The patient was discharged on the fortieth day with satisfactory and uneventful recovery. His blood count had returned to normal by that time. However, the patient died 3 months after hospital discharge.

Summary

Radical amputation is to be considered when no other mode of therapy will eradicate the disease process. An aggressive attack by the orthopedic specialist will often result in palliation and occasionally in cure.

Careful preoperative evaluation and screening are essential, especially in cases of malignancy, in order to detect metastatic lesions.

Direct metastasis or extension of the primary tumor beyond surgically correctable limits calls for conservative measures; hence major amputation should be undertaken only if symptomatic relief is anticipated. X-ray therapy is occasionally useful for controlling the primary tumor and in the palliation of metastatic growth. The patient must also be appraised to determine whether or not he could stand such a major procedure.

Direct open biopsy was performed in two cases, with a positive result in one case and suggestive evidence of malignant change in the second case. It is controversial whether open or closed biopsy should be used.

Preliminary psychologic adjustment of the patient and his family should include clarifying of the procedures to be carried out and postoperative adjustment anticipated.

During the postoperative period, the orthopedist is joined by the brace maker, physiotherapist, and rehabilitation team in striving to once again link the patient with normal activities. An attempt is made to replace the loss of vital function in the upper or lower extremity by substituting prosthetic appliances.

Appreciation is expressed to Dr. Arnold Gerber of Metropolitan Hospital for permission to prepare a case summary of his patient with lymphangiosarcoma.

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Peritoneal dialysis

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The problem of renal failure, whether primary or secondary, is most complex and challenging. Treatment of the patient with renal failure has changed considerably in the last 5 years. One of the most important recent contributions is that of Maxwell and his associates,[1] who have described a refined procedure for the intermittent peritoneal dialysis.

It is the purpose of this paper to present a brief historical background and review of the literature in the development of the technic of peritoneal dialysis, and to relate our experiences and results with this procedure at Art Centre Hospital.

History and therapeutic rationale

History • An area of about 20,000 sq. cm. of semipermeable membrane is presented by the peritoneal surfaces of the adult.[2] As early as 1877, it was shown that the peritoneal surfaces will allow the passage of solutions of crystalloids into the blood after their instillation into the peritoneal cavity. In 1922 Putman,[3] after studying the passage of the crystalloids across it, reported that the living peritoneum is an excellent dialyzing membrane. It will also permit the passage of noxious substances from the blood stream into the peritoneal cavity, or in the opposite direction, until concentration equilibrium is reached.

Ganter[4] was apparently the first to take advantage of these properties of peritoneal membrane; he instilled solutions into the peritoneal cavities of rabbits, guinea pigs, and two patients with renal failure. He then waited until equilibrium had been reached between the blood stream and the fluid in the peritoneal cavity, and then drew off the latter. In so doing he effectively extracted from the blood substances dialyzing across the membranes.

The studies of Fine, Frank, and Seligman[5] deserve mention. Their technic for continuous peritoneal lavage was used frequently at first. However, it was much too complex and produced too many complications, such as overhydration and peritonitis. Using a later modification of their technic, Fenn, Nalefski, and Lasner[6] treated a patient by transperitoneal lavage for 26 days.

Despite the introduction of many refinements in the technic of peritoneal dialysis, the procedure continued to be plagued by obstruction phenomena caused by the omentum. For many years use of the procedure was discarded; recently Grollman, Turner, and McLean[7] have again renewed interest in the intermittent method of peritoneal lavage. They found that they had longer survival rates in nephrectomized dogs with peritoneal dialysis than with the artificial kidney. The use of this technic in 5 patients with renal failure for periods varying from 16 to 48 hours caused marked decreases in the levels of blood-urea nitrogen and creatinine and improvement in the abnormal electrolytic state.

At present either the short-term continuous technic or the intermittent technic of Grollman and his coworkers appears to be the method of choice in peritoneal lavage.

Rationale • The purpose of all methods of dialysis is the selective removal of retained metabolites with the correction and maintenance of water and electrolyte homeostasis. The prime objective in acute renal failure is the removal of potassium in order to reduce extracellular concentration and prevent death from this cause during oliguria. Secondarily, the removal of retained anions and organic metabolites by artificial methods will make the clinical course less stormy, while water elimination removes the

This paper was prepared for publication during a residency in the department of internal medicine of Art Centre Hospital, Detroit, of which Dr. S. F. Ellias is chairman. Dr. Shapiro is the recipient of a 1960 Lederle Grant in Internal Medicine.

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hazard and eliminates pulmonary edema. It must be stated that the artificial kidney can meet these objectives more effectively; however, the end result over a longer period of days is approximately the same with peritoneal dialysis.

In advanced chronic uremia the aim is prolonged maintenance of electrolyte and nitrogen balance, together with the removal of sufficient anions and organic metabolites to cause a degree of improvement in functioning renal tissue. This may mean the employment of the dialyzing procedure several times. Since dialysis by means of the artificial kidney requires qualified and well trained personnel, besides necessary equipment and rigid laboratory control, peritoneal lavage should be given consideration.

Case studies

Method and materials • Five patients with various forms of acute and chronic renal disease were treated by peritoneal dialysis, one patient on two occasions. In the first two, nasal oxygen tubes in which additional holes were cut were inserted into the peritoneal cavity. However, these proved to be unsatisfactory because of obstruction caused by kinking, blood clots, and the omentum. For the latter three cases a new catheter was developed; this was found to be vastly superior.

The bladder was emptied before making the incision, and a Foley catheter was inserted. Except in one case, the procedure was performed at the bedside.

The best and simplest way of inserting the tube is through a small infraumbilical midline incision to the peritoneum, with puncture of the membrane and introduction of the tube through the trocar. The tissue is then secured snugly around the tube to prevent leakage. We distended the peritoneal cavity with several liters of dialyzing solutions, as recommended by Legrain and Merrill,[8] to minimize the danger of bowel perforation with a sharp trocar. Commercial dialyzing solutions which were used (Dianeal and Peridial) have compositions as follows:

Compounds	mEq./L.	Gm./L.	mOsm./L.
Sodium	141.0		140.0
Chloride	101.0		101.0
Calcium	3.5		2.0
Magnesium	1.5		1.0
Lactate	45.0		45.0
Dextrose		15.0(70.0)	83.0
Totals	292.0		372.0

Potassium is omitted because dialysis is often performed to correct hyperkalemia. In the present series of cases 4.0 mEq. of potassium chloride were added to every other solution. Also added to alternate bottles were 25 mg. of tetracycline and 10 mg. of aqueous heparin.

The solutions were warmed to body temperature prior to instillation. The solutions were allowed to run into the abdomen; this usually took about 10 minutes. At the end of 1 or 2 hours the solution was drained off into the same bottles; drainage is usually complete within 20 to 30 minutes. The number and duration of such treatments varied from 17 to 53, in periods of 18 hours to 3½ days.

Complications • The most troublesome but the least injurious complication was obstruction of the polyethylene tube. This problem has been reduced greatly with the introduction of newly developed peritoneal tubes and occasional assistance from a catheter stylet to free any fibrin clots that may have formed.

In this small series of cases, peritoneal lavage was accomplished with the patient experiencing no more than a sense of fullness or discomfort. Severe pain seems to be related to overdistension of the peritoneal cavity, the presence of peritonitis (which did not occur in our cases), and the accidental introduction of fluid into the tissues.

Case reports

Case 1 • This 37-year-old white woman was admitted to the hospital with a chief complaint of nausea and vomiting of two weeks' duration, a condition which had become progressively worse.

She had been previously admitted to the hospital with the admitting diagnosis of cholecystitis with cholelithiasis and had been diagnosed as having chronic pyleonephritis. She had also been treated for hypertension.

Her admission blood pressure was 200/120. She showed marked anemia, with a hemoglobin of 7.3 grams (47 per cent), an erythrocyte count of 2,410,000 per cu. mm., and hematocrit reading of 22.5 per cent. Urinalysis throughout her hospital stay showed a specific gravity of 1.010, with numerous erythrocytes, abundant leukocytes, and albumin of plus 2 to plus 4. Her blood-urea nitrogen at admission was 76 mg. per 100 cc., and creatinine was 9.48 mg. per 100 cc.

The patient was started on conservative medical therapy; however, the uremia became markedly worse and was complicated with hypertensive encephalopathy. The patient underwent cystoscopy and had bilateral retrograde pyelograms taken, without revealing any evidence of obstructive phenomena. On the eleventh hospital day intermittent peritoneal lavage was instituted. On the day preceding dialysis her hemoglobin was 10.4 grams (67 per cent), hematocrit was 32.5 per cent, and there were 3,400,000 erythrocytes. Blood-urea nitrogen was 96 mg. per 100 cc.; uric acid was 13 mg. per 100 cc.; and creatinine was 10 mg. per 100 cc. Serum phosphorus was 9.15 mEq.; serum calcium and plasma chlorides were 79 mEq.; serum sodium was 130 mEq.; and serum potassium was 4.5 mEq.

The plastic nasal oxygen tube was inserted surgically. Peritoneal dialysis was started. The pa-

tient was dialyzed continuously for a period of 3 days. After completion of the dialysis the blood-urea nitrogen had fallen to 35 mg. per 100 cc.; creatinine was 5.8 mg. per 100 cc.; plasma chlorides were 81 mEq.; serum sodium was 135 mEq.; serum potassium was 4.8 mEq.; serum calcium was 10.9 mg. per 100 cc.; and serum phosphorus was 8.9 mg. per 100 cc.

The patient tolerated the procedure quite well. She did have a complaint of right-sided chest pain on the second day. A roentgenogram of the chest revealed a minimal degree of left hydrothorax. On the second day, the plastic nasal tube plugged and had to be reinserted. During the 3 days we performed ten 1-hour dialyses and thirteen 2-hour dialyses. The peritoneal aspirate was clear throughout the procedure. Cultures failed to grow bacteria. The patient was discharged 2 days later, free of uremia, but with persistently abnormal urinary findings.

The patient remained clinically well for a period of 4 to 5 months, and then her symptoms of nausea and emesis recurred, with weight loss. On readmission the hemoglobin was 7.25 grams (46.8 per cent), erythrocyte count was 2,280,000, and the hematocrit reading was 23.5 per cent. Urinalysis revealed persistent albuminuria, hematuria, and pyuria. Plasma chloride was 96.1 mEq.; serum sodium was 146 mEq.; serum potassium was 5.3 mEq.; serum calcium was 10.8 mg. per 100 cc.; serum phosphorus was 8.45 mg. per 100 cc.; blood-urea nitrogen was 94 mg. per 100 cc., and creatinine was over 10 mg. per 100 cc.

The patient was placed on a conservative medical regimen for approximately 6 days, without any signs of improvement. It was then decided that she should undergo intermittent peritoneal lavage. Blood studies at this time revealed a plasma chloride of 89.7 mEq., serum sodium of 134 mEq., and serum potassium of 4.4 mEq. Creatinine was over 10 mg. per 100 cc., and blood-urea nitrogen was 102 mg. per 100 cc. A new improved peritoneal catheter was inserted into the abdominal cavity. The patient underwent twenty-four dialyses. Eighteen were 1 hour in length and six were 2 hours in length. At the completion of treatment the patient's condition improved substantially, and the tube was removed. The blood-urea nitrogen had fallen to 48 mg. per 100 cc.

The procedure was considered a valuable adjunct in the management of this case.

Peritoneal lavage has proved to be an effective means for treating both the clinical and chemical manifestations of uremia. It can be performed by nurses in the patient's room with the poorest of equipment and a minimum of laboratory control

Case 2 • A 60-year-old white man was admitted to the hospital with icterus and marked edema, in a state of pending hepatic coma. At admission his hemoglobin was 10.8 grams (70 per cent); erythrocyte count was 3,800,000 per cu. mm.; hematocrit reading was 28.6 per cent; and blood-urea nitrogen was 17 mg. per 100 cc. The total protein and albumin-globulin ratio was 6:2. Albumin was 3.0; cephalin flocculation, 4 plus; and alkaline phosphatase was 5.5 mg. per 100 cc. Urinalysis showed granular hyaline and waxy casts throughout the hospital stay. Prothrombin time was 50 per cent.

On the fifth hospital day the blood-urea nitrogen had risen to 52 mg. per 100 cc. Serum ammonia level was 0.1 mg. per 100 cc. Creatinine was 2.85 mg. per 100 cc. The patient was placed on strict medical management. He had lapsed into a hepatic coma, and was placed on carbohydrate feedings, intravenous neomycin, arginine, and glutamine. He came out of the hepatic coma and was rational.

On the fourteenth day it was decided, because of a progressive azotemia and oliguria, that the patient should undergo peritoneal dialysis. At this time, he had a blood-urea nitrogen of 168 mg. per 100 cc.; plasma chloride was 83.1 mEq.; serum sodium was 125 mEq.; serum potassium was 4.0 mEq.; and creatinine was 8.2 mg. per 100 cc.

The patient underwent fifty-one 1-hour dialyses. At the time of completion of dialysis, the blood-urea nitrogen had fallen to 45.6 mg. per 100 cc. Plasma chloride was 76 mg. per 100 cc.; serum sodium was 136 mEq.; and serum potassium was 3.5 mEq. The patient improved clinically and began to put out urine. However, he again lapsed into a hepatic coma and died.

Prolonged peritoneal dialysis on this patient was of considerable value. This case demonstrated the value of the new tubes and the facility with which the lavage is accomplished, on the successful insertion of the tube into the peritoneal cavity.

Case 3 • A 46-year-old white woman was admitted to the hospital in acute distress, with chief complaints of dyspnea, choking sensation in the throat, and high blood pressure of several years' duration. She had been treated for numerous kidney infections throughout her early adult life. Admitting blood pressure was 244/124. There was an enlarged palpable right lobe thyroid.

The patient was placed in an oxygen tent immediately. A chest roentgenogram revealed pneumonitis involving the right lung. Blood tests showed there to be 1,730,000 erythrocytes; hemoglobin of 6.5 grams (42 per cent); hematocrit reading of 20.5 per cent; and 12,950 leukocytes. Blood-urea nitro-

gen was 79.0 mg. per 100 cc.; fasting blood sugar, 121 mg. per 100 cc.; serum calcium, 12.5 mg. per 100 cc.; and serum phosphorus, 4.9 mg. per 100 cc. Urine had a 3 plus albumin and a moderate amount of erythrocytes and very numerous leukocytes.

The patient was started on intensive medical therapy. However, on the second hospital day she was found to be in acute distress with acute pulmonary edema. Digitalization was begun. Her condition rapidly deteriorated, and on the third hospital day her blood-urea nitrogen rose to 111 mg. per 100 cc.; serum sodium was 122 mEq.; serum potassium was 5.18 mEq.; and serum chloride was 76.6 mEq.

Peritoneal dialysis was started. The patient underwent fifteen 1-hour dialyses before she died. At the time of death the blood-urea nitrogen had fallen to 91.2 mg. per 100 cc.

Findings at necropsy included marked hydronephrosis on the left side, subacute pyelonephritis, acute pulmonary edema, bronchopneumonia, and a diffuse thyroid goiter.

In this case the procedure was started to stabilize the blood chemistry, but it did not prevent further clinical deterioration. In retrospect, peritoneal lavage should have been started sooner.

Case 4 • A 73-year-old white woman was admitted to the hospital with a chief complaint of severe right flank pain with radiation around to the abdomen, for a period of 48 hours, and this condition had become progressively worse. She had marked abdominal distension with muscular guarding in the left and right quadrants. Blood tests revealed 4,200,000 erythrocytes; hemoglobin of 12.4 grams (80 per cent); hematocrit reading of 40.5 per cent, and leukocytes, 27,500. Blood-urea nitrogen was 67.0 mg. per 100 cc.; serum sodium, 130 mEq.; serum potassium, 4.4 mEq.; serum chloride, 9.6 mEq.; and serum calcium, 9.0 mEq.

Consultation was held between the medical and surgical staffs, and it was decided that the patient should have an operation. She was taken to surgery on the second hospital day. There was no evidence of bowel obstruction or any acute abdominal emergency, but there was evidence of cholelithiasis and uterine fibroids.

It was decided that peritoneal dialysis should be started, and the polyethylene tube was inserted at the time of operation. The patient underwent sixteen 1-hour dialyses before she died. The blood-urea nitrogen at the beginning of dialysis was 79 mg. per 100 cc.; at the time of her death it had fallen to 60.5 mg. per 100 cc. The procedure was of value in lowering the blood-urea nitrogen, but at the rate it was used, it was not sufficient to prevent the progression of her symptomatology. Unfortunately no necropsy was performed.

Case 5 • A 50-year-old white woman was admitted to the hospital with a diagnosis of Kimmelstiel-Wilson's disease. The patient was comatose on admission. Her blood sugar was 378 mg. per 100 cc., and blood-urea nitrogen was 132 mg. per 100 cc. The erythrocyte count was 4,500,000; hemoglobin was 13 grams (85 per cent); and hematocrit reading was 44 per cent. Serum calcium was 7.5 mg. per 100 cc.; plasma chloride was 103 mEq.; serum sodium was 148 mEq.; serum potassium 5.2 mEq.; creatinine was 5.28 mg. per 100 cc.; serum phosphorus was 14.5 mg. per 100 cc.; and serum calcium was 7.5 mg. per 100 cc.

Peritoneal dialysis was instituted immediately. The patient underwent nineteen 1-hour dialyses. The blood-urea nitrogen and potassium concentrations were being stabilized; however, the patient's condition deteriorated completely before the procedure could be completed. Postmortem examination revealed an acute pyelonephritis. Sections of the kidney revealed areas of extensive necrosis. Tubules were noted to be atrophic. There was dense diffuse inflammatory-cell infiltration. We believe, in retrospect, that treatment was not instituted early enough in this case.

Comment

Peritoneal lavage has proved to be an effective means for treating both the clinical and chemical manifestations of uremia. In all six instances in which dialysis was performed, there was a decline in blood-urea nitrogen and creatinine levels, and stabilization of the blood chemistry. The procedure can be performed by nurses in the patient's room with the poorest of equipment and a minimum of laboratory control. It can be used on children as well as on adults. Miller and Finberg,[9] at Mt. Sinai Hospital in Philadelphia, recently reported the use of peritoneal dialysis on a 4-month-old female infant, one was comatose and had marked neurologic signs, from an overdose of sodium given by the mother by mistake. There, peritoneal dialysis was carried out with excellent results.

The procedure accomplishes its purpose at a much slower rate and with less effort and effect over a short period than the artificial kidney. This could represent a limitation of this technic in pa-

The procedure accomplishes its purpose at a much slower rate and with less effort and effect over a short period than the artificial kidney. This could represent a limitation of this technic in patients who demonstrate an intense catabolic response

tients who demonstrate an intense catabolic response. In assisting patients with chronic renal insufficiency over acute episodes, this slower rate may be particularly suitable; a current concept held at a leading center employing the artificial kidney is that it is better to effect a more gradual chemical re-equilibration in such patients.[10]

It is possible to recover by peritoneal dialysis the usual drugs ingested which cause renal failure. To my knowledge, there have been no comparative studies performed. However, it would seem unlikely that the removal of aspirin, barbiturates, bromides, and other dialyzable material would approach the rates which have been obtained with the artificial kidney.[11-13]

Peritoneal lavage possesses the important advantages of simplicity and availability. Use of the artificial kidney remains the treatment of choice, since it is faster, more efficient, and more reliable. The practical disadvantage of the artificial kidney is that the overall requirements for optimal utilization are such as to restrict its use to comparatively few institutions.

Summary

The use of peritoneal dialysis in five patients (one having the procedure performed on two different occasions) has been reported. The smallest number of lavages performed in an individual was seventeen and the largest number was fifty-three. The lavage solutions have been standardized by Maxwell and coworkers,[1] and are available under the proprietary names of Dianeal and Peridial. The solutions are passed into the peritoneal cavity through a polyethylene catheter. After 1 to 2 hours the lavage solution is drained off through the same tube used for instillation.

The most frequent complication found in this study was obstruction of the plastic tubes used in earlier cases. This problem has been minimized by the use of the newly developed peritoneal catheters. Occasionally a patient complained of severe pain; this may have been caused primarily by overdistention of the peritoneal cavity or extravasation of fluid into the tissue, or rarely (and not in this study) peritonitis.

In all six cases there was a marked decline in blood-urea nitrogen and creatinine levels, the greatest change being from 146 mg. per 100 cc. to 45 mg. per 100 cc. I feel that these results are directly related to the employment of dialysis.

In comparative terms, the artificial kidney is much faster and peritoneal lavage infinitely simpler. Both procedures are clinically effective, but it is always desirable to have available more than one therapeutic modality in the treatment of any disease.

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EDITORIALS

THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION

This periodical is the official publication of the American Osteopathic Association.

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An editor speaks for himself

As you may have already noted, the American Osteopathic Association has a new Editor. He comes to this position with some experience in osteopathic organizations and a large number of convictions. He believes that it is the responsibility of the Editor to interpret for the profession the actions and policies of the Association. He realizes that it is his responsibility to speak with a clear voice, even at times when it might be easier to be vague. He realizes that he has at times been a controversial figure in the affairs of this Association, but he realizes equally well that to avoid controversial issues is to avoid the issue itself.

Your Editor views the management of the Editorial Department, the writing of editorials, and the providing of guide lines for thought as important responsibilities in these crucial days. He is neither a master of rhetoric nor a student of semantics. He believes that his chief responsibility is to be understandable.

Your Editor believes in the future of the osteopathic profession. He believes that osteopathic medicine has a contribution to make that has not been fully made. He does not believe that its contribution is solely to physical medicine, nor does he believe it to be limited to the confines of that term. He believes that the osteopathic school of practice is more than a performance of a therapy, more than the development of a diagnostic technic, and more than an episode in the "continuum of medicine."

Your Editor believes that there is a need for a strong minority school of medicine, and that the recognition of such a minority position is inherent in the American way of life. He is opposed to any organization or agency setting itself apart as the sole judge of what is "approved" medical practice. He is acutely aware of the sociologic and economic problems affecting and relating to the practice of medicine today. He does not believe that only one medical organization should have a voice in providing solutions to these problems.

In these pages each month, your Editor will within the limits of his ability speak clearly and without fear. He will try to be creative rather than merely provocative. He will make no pretext of avoiding emotion, because he does not believe that emotion is a disease. He believes that it was enthusiasm and faith, and hopefulness when things looked hopeless, that brought this profession to its greatest success. He believes that complete objectivity without loyalty, faith, and creativeness is a vacuum into which failure can move.

Your Editor speaks of himself in this manner so that you may know. He speaks with humility but with confidence. The confidence lies not so much in himself as in the profession he serves. His desire is to see not only that the profession is provided with facts for decisions but also with understanding. For knowledge without understanding can become our most destructive force.

Yes, the Editor speaks for himself, but only as he speaks to the profession. He neither seeks nor expects complete agreement with all his words. He does expect the profession to be agreeable and to ponder the matters which he brings to its attention. But more than speaking, he desires to listen. He wants to know your reaction, your suggestions, and your ideas.

At heart your Editor is an idealist. He does not believe that the time for ideals has vanished. He asks for little other than the opportunity of coming into your minds at periodic intervals and thinking with you concerning the challenges of a great profession.

With decisive determination

At a historic meeting of the House of Delegates and Board of Trustees of the American Osteopathic Association, held in Chicago early in July, the mood of the profession as it faced its hour of greatest challenge could have been characterized by two words. The two words are *decision* and *determination.*

As a response to the California challenge the policy-making body of the American Osteopathic Association, acting with forceful unanimity rarely exhibited in this or any other professional group, reached important conclusions and made important decisions.

Successful leadership is predicated upon the ability to make decisions. Too many decisions, however, are made impotent by failure to add to them that most important ingredient for success, the magic catalyst, determination.

The correctness of a decision is rarely ascertainable at the time it is made. This can only be judged by results. The results of decisions made in Chicago by your profession will depend on your local and individual determination.

What were these decisions and why were they necessary? To understand these things the situation in California must be understood. It is my opinion that even now it is not understood by the majority of the profession. Perhaps this is everybody's fault, and perhaps the fault is a natural one. The reason for this lack of understanding is that discussions and debates have centered around metastatic issues rather than the primary one. The challenges to the profession in California do not stem solely from policy differences between the American Osteopathic Association and its former affiliate, the California Osteopathic Association. The problem is not primarily one of people, but one of survival. It is a national problem, not a California one. Fate determined that it was first to come to a head in that state, but it could have been yours.

The question before us, therefore, is just this simple and just this complex: *Will the osteopathic profession survive or will it be destroyed?*

For the past 20 years osteopathic medicine in California has been slowly undermined by clever adversaries both in and out of the profession. The potency of our college was diluted, fears were fanned, and propagandists thrived. As the outcome of this has been successful, the American Medical Association, guided by the leaders of the California Medical Association, has recommended it to its component societies as a blueprint for the elimination of osteopathy. They have been told that this is a respectable manner in which the "osteopathic problem" can for once and all be solved to the satisfaction of the American Medical Association. The blueprint essentially calls for these steps:

1. Eliminate osteopathic practice acts wherever they exist and cease licensing osteopathic physicians and surgeons.
2. Gain control of osteopathic colleges and convert them into medical schools, thus shutting off the future growth of the osteopathic profession.
3. Gain control of the too rapidly growing osteopathic hospital system across the country and place staffs under medical control, thus making added beds available to the medical profession.
4. Remove any possibility of recognition of osteopathic specialists and reconvert them to general practice.
5. Eliminate the D.O. degree which leaders of organized medicine irritably complain is too often understood by the public to mean M.D. plus.
6. Provide for separate and distinct medical societies as organizational concentration camps for repentent D.O.'s.

The A.O.A., however, determined that this plan for elimination must be stopped in California and must be fought wherever it threatens. In making this decision, comparative costs were studied. The cost of prevention and protection was found to be far less than the cost of recovery or capitulation. Therefore, the House of Delegates of the American Osteopathic Association unanimously approved two major means of raising funds to prevent the plan for elimination from spreading into your state and mine, a $25.00 raise in dues, which will be implemented in June 1962, and a $75.00 assessment to raise a $500,000 fund for aggressive resistance.

Our profession and our professional lives are at stake. Each member must assume his personal share in this organization's pledge of decisive determination.

The assessment

On July 11, 1961, the A.O.A. House of Delegates by unanimous action passed House Paper Number 21 which read:

> That a budgetary item of $500,000 be allocated to promote the public health by preserving and extending the availability of osteopathic health care in all the states and that a $75.00 assessment per member be levied to create this fund.

Defining the words sometimes adds clarity to a resolution. Definition of "assessment" seems particularly appropriate here. As the noun "assessment" is derived from the verb "assess," its real meaning rests with the verb. The definition which seems most pertinent to our present situation is, "Assess: To set a value on; to appraise; specifically, to make an evaluation or official estimate of property for the purpose of taxation; as, *assessed valuation is often less than market value.*" It is further suggested that a good synonym for assess is "estimate."

So, as we look at the $75.00 assessment, the question that automatically seems to evolve is: What is *your estimate of the assessed valuation* of your opportunity to serve, your osteopathic hospitals, and your professional life? Certainly it is reasonable to assume that $75.00 is much less than the "market value" of your part of the osteopathic profession.

Contrary to the belief of some, this assessment is in no way levied to retain in our membership those osteopathic physicians in California who have by their own act denied both their personal and organizational heritage. Nor are these funds to be allocated solely to fighting the California conspiracy. The passage of this resolution was a unanimous expression of the House of Delegates that the American Osteopathic Association is ready to use any and all means to preserve the integrity of D.O. licensure and its relationship to society in your state as well as in California. It is a fund to be devoted to the preservation and development of the autonomy of osteopathic hospitals, the recognition of your specialty certification, and, in fact, your status as a physician and surgeon in your community.

The American Osteopathic Association is a financially stable organization. Nothing must disturb its stability as it has many jobs to perform and many publics to serve. Therefore, it was thought wise to develop a specific fund for the specific purpose stated in the resolution. It has been the hope of adversaries both within and without the profession that this fight for professional security would undermine the financial structure of the A.O.A. The assessment is a major step in avoiding such a calamity.

Osteopathic physicians and surgeons all over the country are practicing today because those who preceded us were willing to work and pay for our practice rights, our hospitals, and our colleges. As many know very well, the cost was far more than $75.00. This assessment is not so much a tax as it is an opportunity to demonstrate in some small measure our appreciation for what others have provided and for what we ourselves wish to maintain.

Negative editorial statements like negative motions are inappropriate means for conveying ideas. But let us consider what the result would have been if no financial means had been developed to "preserve and extend the availability of osteopathic health care." It would have been a clear indication to both friend and foe that there was no intention of implementation. It would have meant that we were about to abandon legal procedures in California which already have proved their deterring value against the moves of organized medicine to eliminate us. It would have indicated to every divisional society of the American Osteopathic Association and to each member that the fight was over. It would have demonstrated that the American Osteopathic Association had no interest in providing a better environment for osteopathic physicians and surgeons. It would have shown that we had no desire to preserve your osteopathic hospitals, your specialty certification, or your status as physician and surgeon (D.O.).

Too few people understand the individual stake that they have in this program. Unfortunately, discussions of this problem have too often been based on peripheral issues rather than the central issue. The issue is survival, not amalgamation or nonamalgamation, not an M.D. degree or a D.O. degree or both, and certainly not a group of recalcitrant osteopaths in California. The issue is you and your future. As our Executive Director stated so well in his annual report before the House of Delegates, "If the osteopathic colleges, the divisional societies, and the other groups related to the A.O.A. will not unite on a common front, the A.O.A. cannot protect the profession."

However, to emphasize the positive, your House of Delegates by the passage of this assessment demonstrated its faith and confidence in you. An assessment is a tax; it is also your part of assessed valuation which is far less than the market value and potential of your profession.

The man from Ohio

On July 12, 1961, Charles L. Naylor, D.O., became the sixty-second President of the American Osteopathic Association. At a period when the American Osteopathic Association is facing its most important challenge, it has chosen a leader eminently qualified for these turbulent times.

Perhaps never before in the history of the American Osteopathic Association has there been a greater need for mature and stable leadership. Perhaps never before has the need been greater for objective analysis of and creative solutions for our problems. As the osteopathic profession has honored Dr. Naylor, so will Dr. Naylor in turn honor his profession by his service.

A graduate of the Des Moines Still College of Osteopathy, 1933, Dr. Naylor moved to Ravenna, Ohio, 2 years later to begin practice. His interest in organizational affairs goes back to his earliest years in professional life. He served as an alternate or a delegate from Ohio to the A.O.A. House of Delegates from 1946 to 1961. In 1947, he became a trustee of the Ohio Osteopathic Association, the same year his wife became president of its auxiliary. Ohio quickly realized his leadership ability

and selected him as its president for 1953.

Dr. Naylor's service on a multitude of committees, both in the state of Ohio and at the A.O.A. level, has been outstanding. Perhaps his greatest contribution was made as chairman of the Osteopathic Progress Fund Committee.

In addition to his extensive background in osteopathic affairs, Dr. Naylor has been active in the affairs of his church and community. He became a member of Rotary International in 1936, served as its president in Ravenna in 1939, and became governor of District 229 in 1952. Since 1953 he has been a member of the Ravenna Board of Education. His many public and professional contributions will endow his year of leadership with a quality of experience that will be most valuable to this profession.

Dr. Naylor is unassuming, dedicated, and forthright. He merits and deserves our unqualified support.

"To stir men's hearts"

With these words, the 1960-61 president of the Auxiliary to the American Osteopathic Association, Mrs. Campbell A. Ward, completed her report to the A.O.A. Board of Trustees.

The Auxiliary to the American Osteopathic Association is this year celebrating its twenty-first birthday. It has come of age. Few physicians realize the tremendous work being accomplished by this most important affiliated organization. Without repeating the pleasantries which are traditional when describing such a fine group of women, it is important at this time to point out the beneficial influence of this organization.

Mrs. Ward's conclusions derived from her year of service to the profession and involving over 40,000 miles of air travel are of great interest. They are as follows:

1. The osteopathic family has "cream-of-the-crop" folks in every area.

2. Family members are basically loyal to the osteopathic profession—not only loyal, but dedicated to its concepts. This holds true also for the college groups visited.

3. The so-called California situation has served to crystallize our thinking in a positive manner and knit us more closely together.

4. The relationship between auxiliaries and divisional societies might be improved by closer liaison; for example, an auxiliary member on the public relations committee and the convention planning committee at state level and cross representation at district level, so that each may understand the objectives of the other and promote better internal and public relations.

5. Auxiliaries need to be made conscious of community public relations as the most important part of their work.

6. There is a need to develop activities emphasizing the support of our profession and colleges rather than siphoning off sorely needed resources to other areas.

7. Newsletters and more communications with the individual member in any manner within the scope of the Auxiliary are important to bring about the sense of belonging.

Mrs. William B. Strong, the present president of the Auxiliary, and last year's membership chairman, reported an all-time high in Auxiliary membership. There are now 3,795 members, over 200 more than the year before.

The Auxiliary awards twelve $1,500 scholarships to deserving students, an annual $18,000 investment in osteopathic education.

Perhaps one of the most important undertakings of the Auxiliary is the promotion of the A.O.A. Christmas Seal program. Under the direction of Mrs. George Northup and with the assistance of Mrs. Wesley Larsen and Mrs. Alyce Balfour of the A.O.A. Central Office, this program has taken on renewed vigor. A goal of $75,000 has been set for next year, and our women are determined that the goal will be met.

Limitation of space prohibits a discussion of all of the Auxiliary's many programs. It suffices to say that the growing influence of the Auxiliary is tremendously important at this time. If your wife does not participate in auxiliary work in her area, *she should.* If your wife does not realize the importance of her understanding of the osteopathic profession and her opportunity to contribute to its development, *she should.* If your wife does not realize that in this hour of the profession's greatest challenge, her services are needed and desired, *she should.* As Mrs. Ward so succinctly stated:

> Time ran out [this year] for fence sitting or "middle-of-the-road" philosophy. Each physician was asked to declare himself. Each D.O.'s wife no doubt played her part in influencing her husband. Did she sincerely back her husband and admire his sense of purpose? Was she as dedicated as he to the osteopathic concepts? Did she, too, read the many communications from the A.O.A. and the A.A.O.A. to keep herself informed and abreast of the situation as it developed?

Mrs. Ward's concluding remarks in her annual report stir the very roots of our imagination and our service to this profession. The quotation from Frank Lloyd Wright is a splendid admonition for all of us: "Make no small plans; they have no power to stir men's hearts."

Editorial comment

One of the problems that the American Osteopathic Association has had in recent months has been transmission to the profession of all the information relating to developments in California that has flowed into Central Office. Most of the information is important and authentic and provides the necessary background for arriving at important decisions. A few items either cannot be authenticated or cannot be released in their entirety, as the confidences of individuals must be protected. One such piece of information which falls into both categories is, however, important for every osteopathic physician to consider. It is a letter which was read into the record of the May 1961 President's conference held in Chicago. Without revealing the confidential source, and making no pretext towards establishing its authenticity, it is quoted here because it represents a viewpoint concerning the merger of the California Medical Association and the California Osteopathic Association which is difficult to contradict after a careful study of the agreement.

Dear Doctor is the salutation of a letter reported to have been sent by a high official of the California Medical Association to an M.D. in California who apparently raised seven questions important for your present consideration. This letter reads as follows:

In reply to your letter of February 14, 1961, relative to the possibility of amalgamation of the osteopathic profession and the medical profession in California, please be advised that it has *never been the intention of the California Medical Association that the two professions be amalgamated.* [Italics supplied.] It is the position of the California Medical Association that there is no logical reason for the existence of an osteopathic school or the osteopathic profession in California. This is especially true since the Board of Osteopathic Examiners has stopped issuing drugless licenses some years ago. As to the questions contained in your letter, I shall try to answer them in the order presented.

Answer to Question No. 1: There will be no merger or amalgamation of the California Osteopathic profession with the California Medical Association. The osteopathic physicians and surgeons will be given membership in the newly formed component medical society under the control of the California Medical Association.

Answer to Question No. 2: Membership in this component society will not admit them to membership in any medical society associated with the California Medical Association.

Answer to Question No. 3: It is the intention of the C.M.A. to take over the osteopathic school and issue a medical degree from this school to osteopathic physicians and surgeons after a refresher course has been given. This school at the present time has the right under its present charter to issue the degree of doctor of medicine.

Answer to Question No. 4: No osteopathic physician or surgeon will be granted an M.D. degree from any recognized medical school in California.

Answer to Question No. 5: It is not the intention or the obligation of the C.M.A. to encourage the acceptance or appointment of osteopathic physicians and surgeons to hospital staff appointments of recognized medical hospitals.

Answer to Question No. 6: Their board specialists cannot be recognized by either the C.M.A. or recognized hospitals since it is impossible for any of their board specialists to qualify under the requirements set forth by the certifying board of the American Medical Association which requires that a member of the American Medical Association to be certified in any specialty must hold an M.D. degree from a recognized medical school and receive his training in a hospital of not under 500 bed capacity.

Answer to Question No. 7: Osteopathic members of the new component society, although possessing an M.D. degree, will not be eligible for membership in the American Medical Association as are members of the C.M.A.

In summarizing the situation in the uniting of the two professions, it is not the purpose or intent of the C.M.A. to unite or amalgamate the two professions as the C.M.A. takes the position that there is no reason for the existence of the osteopathic physician and surgeon in California. It is the intent of the C.M.A. to absorb the present members of the osteopathic profession and those immediately graduating from the osteopathic school into a component society established under the control of the C.M.A. Since there will be no further licensing of osteopathic physicians and surgeons in California, the problem of eliminating the osteopathic physicians and surgeons by absorption in California will have been accomplished.

If there is further information you desire relative to this subject, I will be most happy to discuss this matter with you.

Whether or not this letter is authentic is of little importance. It does state very clearly, however, the general interpretation of what the unification program in California will have as its result.

"Captive specialists." Increasing numbers of osteopathic physicians and surgeons are now stating that they are unwilling captives of the political maneuvers of the leadership of the California Osteopathic Association. This is particularly prominent among specialists in California who receive their certification from the American Osteopathic Association. Some of them have written the A.O.A. Central Office requesting protection until such a time as they are accepted by organized medicine. One letter which had wide distribution prompted this reply from a fellow specialist. In part, this specialist writes to his friend in California:

The American Osteopathic Association is not, as you state in your letter, "taking away from you what you have earned." The A.O.A. has merely stated that if you do not retain your membership in the two official organized bodies then they will not continue your registered certification on their lists. The A.O.A. is merely stating that it extends its umbrella of protection and certification of competency only to its own. But the choice is left to the individual physician or surgeon as to whether he wants to be one of us or not. . . . Where vital issues are at stake in this world, we cannot afford to remain neutral. Even though not directly involved in the California struggle, all readers of our publication "D.O." know that about three years ago I wrote an open letter to that magazine, the general tenor of which was that I am a physician who emphasizes the *osteopathic* in the designation osteopathic physician, and that I wanted to step up and be counted as such.

You write to Dr. Eveleth "Since I have been so threatened." The threat was not from the American Osteopathic Association. The threat came from your own colleagues in Los Angeles in particular, and to a lesser extent from your colleagues in the State of California who threatened your position as an osteopathic physician and surgeon. You did nothing about this. I say these things in no spirit of ani-

mosity because you have been my friend too long for anything like that. I say them because in the heat of your being hurt you have, I think, lost your perspective. . . .

So you can see that the real purpose of this letter is to try to suggest that you do something positive in the way of action if you really and sincerely would prefer to remain an osteopathic physician and surgeon.

At the last House of Delegates meeting, it was determined that the *long-established* rule that osteopathic specialists in order to maintain their certification must be members of an approved divisional society and of the A.O.A. would continue to be enforced. It was felt by many that if any appeal should be made, it should be made to the *California Osteopathic Association* which prohibits its members, with the threat of expulsion, from belonging to the approved divisional society in California, the Osteopathic Physicians and Surgeons of California. *It was the California Osteopathic Association that set up the restrictive clause* prohibiting its specialists from belonging to both organizations if they so choose. It seems only fair that those individuals who applied such restrictions should be the individuals appealed to rather than asking a national organization to alter its policy for the convenience of those who have exhibited no evidence that they continue to desire to be a part of our profession.

An outstanding executive secretary is William S. Konold of Ohio. When he presented his report to the Ohio House of Delegates this year, that House by unanimous vote passed a resolution for the publication of his complete report in the *Buckeye Osteopathic Physician.* The report is too long to reprint on these pages, but I am sure copies can be secured by writing to him at his executive offices, 53 West Third Avenue, Columbus 1, Ohio. The entire report is so excellent that it is difficult to pick out its most important passages. One section, however, which seemed to be unusually well said appeared under the subhead, "No advantage in Amalgamation." Mr. Konold writes:

In my opinion, if the osteopathic profession becomes an amalgamated part of the AMA at state or national level, and through some maneuver or other you would be given an M.D. degree, then nationwide all you would be is a physician with a degree, M.D., which would not be an earned degree and would therefore be ridiculed. Nationwide there would be the same attitude toward this degree as there was toward "mail order" degrees. There would be no difference in your practice rights. They would be the same as they are today. You would merely be physicians with a questionable M.D. degree.

If you read the package deal, you know the thinking of M.D.'s for schools that are less powerful than the dominant school, allopathic. You don't hear the allopathic physician speaking with great pride and credit about the homeopath except under rare occasions. His is a belittled school of medicine. The eclectic school is a belittled school of medicine. Under this sort of thing we become another belittled group that in no way earned the degree M.D. It would be handed to us. I think your own osteopathic hospitals would have difficulty in growth because they would no longer be osteopathic hospitals. Boards of trustees would open up staffs. The whole scheme of things would change.

I don't believe it would assist anyone, being a D.O. with an M.D. degree, toward hospital privilege in any hospital in Ohio or anywhere. Physicians are appointed to positions on hospital staffs by the authority of the board of trustees, and I don't believe any board of trustees that has been functioning with staffs whose members have the earned degree M.D. would do anything but ridicule this "phony" degree of M.D. They would have all sorts of things to say against you—that it was a "gift" degree, that you are not qualified on the same basis that they are qualified.

And the thing that you have paid for, and suffered for, will be lost and your assets will be taken over. Your assets are your hospitals and your colleges. You are now on the verge of total recognition in the state of Ohio. I don't think that the D.O. unless under very unusual circumstances in the state of Ohio, would be admitted to a hospital staff in a metropolitan city. Those are closed staffs, so to speak. *And you only have to think of the tremendous number of M.D.'s in the state of Ohio who are not on a hospital staff. It isn't that they are not qualified. They are just not on.* [Italics supplied.]

From the state of Michigan many fine editorials have come, written by their president, Dr. Donald Cummings. Writing in the May and June issues of the *Michigan Osteopathic Bulletin,* Dr. Cummings makes these pertinent remarks:

This profession did not climb to its present heights by pretending we are some other profession, or by trying to walk in the shadow of another profession. It got where it is by being proud of the contribution it had made to health care. It is true that the contribution of this profession to medicine is not so apparent in these days of the sulfas and of the antibiotics, as it was in the days before these drugs existed. But it is equally true the application of osteopathic principles can help to prevent many ailments that those wonder drugs cannot; and it is true that in other areas osteopathy can do many things that no drugs can do.

The man who becomes complacent, who rides on the coat tails of others, who walks in the shadows of others ceases to exist as a man. O yes, his name will still be on some shingle . . . but he gets lost among the faceless ones. He is no longer a man in his own right, walking with pride amongst his fellow men, secure in the genuine contribution he is making to all mankind.

Dr. Cummings continues in the June *Bulletin* with these concluding words:

The osteopathic profession will work at all times with all other groups sincerely interested in the improvement of health care of the people. There is a need for different organizations serving the same basic objective. We can see nothing to gain in assisting in the creation of a medical monopoly. The public, the osteopathic physician, has everything to gain by the independence of this profession.

Osteopathic medicine is meeting the challenge of improving health care. The public has passed its judgment; it has given its support. This is the reward of the osteopathic physician.

Almost unanimous support has been given the general objectives of the American Osteopathic Association. However, in fairness it must be noted that all are not in agreement.

The Bulletin of the Washington Osteopathic Medical Association and the *Bulletin of the Long Island Society of Osteopathic Physicians and Surgeons* have been particularly vocal in their disagreement with certain policies of the American Osteo-

pathic Association. Criticism is a helpful thing, providing it creates rather than destroys. Despite what is stated to the contrary by these publications, the American Osteopathic Association is fully aware of its problems. It needs not so much to have its problems restated monotonously as to have brought to it constructive suggestions. Both publications spend much of their editorial space projecting peripheral aspects of the problem. They seem to avoid with intent the hot core of the situation. Whether or not individuals or groups agree with the policy position of the American Osteopathic Association is not as important as it is to point out to their readers that their very professional life, individually and collectively, is in jeopardy.

These words are not written in any spirit of animosity toward our critics, but as a plea for creative rather than negative criticism. As a famous American statesman said, "The things that unite us, not the things that divide us, are important."

A recent statement by Dr. Eveleth is particularly pertinent:

> The A.O.A. is severely criticized both for interfering in the affairs of California and for not preventing the disaster. Recriminations are natural and inevitable, although useless and destructive. Recrimination is the easiest way to participate in a serious problem, but usually it is the only contribution made by those who resort to it.

An editorial, in *The Bulletin* of the New York State Osteopathic Society, courageously points out the central problem of our present situation. In that editorial titled, "Now is the Hour," this statement is made:

> One hundred years ago our country engaged in a war to preserve the Union. Today our profession is faced with a similar war. Our Fort Sumter has been fired upon. The call is out for volunteers. It must not go unanswered. This is the time of decision for all of us. There can be but one decision. *Now is the hour to make it.*

These words are clear and contribute no confusion to the situation.

The A.M.A. in New York revealed some of its problems as well as some of its contradictions. Perhaps never in its history has its public image deteriorated so rapidly. It is under attack at so many levels that it is almost impossible for it to determine where to defend itself. It is only right to say that in the opinion of many in our profession some of these attacks are totally unjustified. The American Medical Association is naturally devoted to supporting its own interests. At its New York convention, it tried to adopt policy which would salvage to some extent its declining public acceptance. However, one example shows how things get out of hand.

It is well known that the A.M.A., on the issue of health care of the aged, supports the Kerr-Mills bill and opposes the Administration bill which would secure funds for medical benefits for the aged under social security. The *Washington Report on the Medical Sciences* had this to say, July 3, 1961:

> As anticipated, AMA reaffirmed its support of Kerr-Mills and its opposition to concept of medical benefits under social security. Regarding latter, the House went further than reference committee recommended, adopting a floor amendment denouncing "deteriorative" King-Anderson bill as a measure "detrimental to public welfare." Indeed, the House enthusiastically indorsed an amendment proposed by Dr. Louis Bauer, former president of AMA, which implied that physicians should "strike" against King-Anderson bill, if enacted.
>
> When cooler heads recognized the implication of the Bauer amendment, a modification was ordered. All this took place late Thursday afternoon, while tellers were counting ballots for president-elect and other offices. Delegates thought they were taking an unusually long time to count; actually the delay was due to time consumed behind scenes in toning down the Bauer blast for reconsideration on the floor.
>
> In original form, Bauer amendment expressed AMA's belief medical profession "will not be a party to implementing any system which is un-American and detrimental to the public welfare." As cleaned up, it concludes: ". . . . will not be a willing party to implementing any system which we believe to be detrimental to the public welfare.

That the American Medical Association even momentarily considered threatening to "strike" against the government of the United States is an unfortunate expression of attitude and does not contribute to the understanding of the public concerning the desires and wishes of any group of physicians and surgeons, whether members of the American Medical Association or the American Osteopathic Association.

A contradiction difficult to understand is how, at the same meeting where they continued to denounce osteopathic physicians and surgeons who practice "osteopathy" as cultists representatives of the A.M.A. could accept that part of the inaugural address of the incoming president, Leonard Larson, M.D., which said (*Time*, July 7, 1961):

> The professional spirit emphasizes conformity to the principles of scientific truth and ethical conduct. *It also recognizes the rights and potentialities of the rebel or maverick who may have a new idea, a different method, a fresh viewpoint.* [Italics supplied.]

The Medical Society of New Jersey was one of the first to take advantage of the "local option" clause regarding relationships with osteopathic physicians and surgeons, adopted by the House of Delegates of the American Medical Association at its June 1961 meeting. On July 12, 1961, the judicial council of the New Jersey society adopted the following resolutions, which were later disseminated to all its members:

> WHEREAS, recent action by the Joint Commission on Accreditation of Hospitals indicates that the presence on hospital medical staffs of doctors of osteopathy having full licenses as physicians and surgeons will not jeopardize *per se* accreditation of such hospitals; and
>
> WHEREAS, in a recent opinion ordering one of the component societies of The Medical Society of New Jersey to accept an osteopathic physician as an active member, the Supreme Court of New Jersey declared that any graduate

of an osteopathic school approved by the New Jersey State Board of Medical Examiners has received "a full course in Medicine"; and

WHEREAS, the Judicial Council of The Medical Society of New Jersey, in conformity with the action of the House of Delegates of the American Medical Association and in support of the code of ethics of the American Medical Association, has heretofore ruled that any voluntary professional association between doctors of medicine and doctors of osteopathy is unethical; and

WHEREAS, the House of Delegates of the American Medical Association at its 1961 Annual Meeting ruled that policy regarding relationships of doctors of medicine with doctors of osteopathy "should now be applied individually at state level according to the facts as they exist"; now therefore be it

RESOLVED, that—previous opinions to the contrary notwithstanding—the Judicial Council of The Medical Society of New Jersey now declares that hereafter in New Jersey it shall not be unethical for members of The Medical Society of New Jersey to enter into voluntary professional association with any person holding a full license as a physician and surgeon granted by the State Board of Medical Examiners of New Jersey who adheres to the same scientific principle embraced by the members of The Medical Society of New Jersey.

In a further statement sent to the members of The Medical Society of New Jersey, Robert M. Backes, legal counsel, said concerning the admission of doctors of osteopathy to the staff of medical hospitals:

In view of the fact that the Joint Commission on Accreditation of Hospitals will now survey for accreditation those hospitals having D.O. staff members, provided all hospital supervision is by an M.D., the governing body of the hospital has the right to write its rules for staff acceptance so as to allow the osteopathic physician as a staff member without violating the code of ethics of the AMA as interpreted by the Judicial Council of the AMA.

It is stated in the same memorandum that in order to be considered for membership in The Medical Society of New Jersey, a D.O. must have the following three qualifications: (1) a D.O. degree from a school recognized by the Board of Medical Examiners of New Jersey, (2) a license to practice medicine and surgery in the State of New Jersey, and (3) an M.D. degree from a school recognized by the American Medical Association.

These actions taken in New Jersey constitute a perfect example of how a state medical association can act in all fairness to both its own membership and the osteopathic profession. They demonstrate clearly that the two professions can develop an atmosphere of understanding without establishing a medical monopoly based on the destruction of the osteopathic profession. The leaders of The Medical Society of New Jersey are to be complimented on a realistic approach to professional association.

Prior to the official announcement of the Medical Society's action, there appeared in *The Sunday Star Ledger*, a Newark, New Jersey, newspaper which has wide distribution, a five-column headline which read "Osteopathy Gains Stature, Facilities in N.J." It discussed in considerable detail the growth of the osteopathic profession in the state and the reasons for the American Osteopathic Association's opposition to the California Medical Association's desire to eliminate the osteopathic profession. It states the case for co-operative coexistence in New Jersey.

The American Osteopathic Association, and in particular its House of Delegates, has made it clear that co-operation and coexistence are the goals of our profession. It is hoped that more state medical associations will adopt the realistic position taken in New Jersey.

All over the United States more newspapers and magazines than ever before are discussing the osteopathic profession, its completeness, its distinctive contributions, and its goals. Recently the *Portland (Maine) Press Herald* published a splendid editorial supporting the position of the American Osteopathic Association and its divisional societies and condemning the "California episode." The title was "There Is a Much Better Scheme Than Merging Medical Professions." The editorial said:

Merger is not the process by which the differences between medical doctors and osteopathic physicians should be dissolved.

A *Sunday Telegram* article drew upon the thinking of representatives of both divisions of the presently divided house of healing to reach the conclusion that no merger such as recently took place in California is currently possible in Maine. Unless something occurs to change the picture considerably we hope no such possibility arises.

The California episode was not the great step forward toward unity that many people thought it to be. It had all the tones of politics, opportunism and abandonment of ideals that created grounds for doubt.

A far more significant break-through in the efforts for greater understanding and cooperation between the two groups is reflected by the action by the Philadelphia County Medical Society last month. In open defiance of the American Medical Association's code, the Philadelphia Society, representing more than 3,400 physicians, acknowledged that osteopaths "practice modern scientific medicine," opened hospitals run by medical doctors to the osteopathic physicians, sanctioned full cooperation, and labelled the AMA attitude toward osteopaths as "completely unrealistic, outmoded, and one which cannot be followed in the Philadelphia area."

In this manner members of both divisions will work and teach side by side in an atmosphere of mutual respect. The public will be given access to more facilities and wider experience without sacrificing the services of the physician in whom great confidence is placed. All that is good in both branches is encouraged and given additional opportunity while new strength is mustered to curtail anything that is bad.

We have not heard any pleas for merger arising from the osteopathic profession in Maine. Medical men have not indicated that they seek any such amalgamation. But the gulf between the two groups seems to be constantly narrowing. May it continue to do so until one day something in the nature of the Philadelphia story may be written here. But let's forget about the merger.

This editorial appeared on June 13, 1961, and of course does not reflect either the subsequent action of the Philadelphia Medical Association or that of the American Medical Association. However, it is a timely editorial and one which should be read and appreciated by all osteopathic physicians.

Time Capsule. When preoccupation with the present becomes too intense, it is mentally refreshing to retire into the confines of the quieter but equally absorbing past. For example, THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION for September 1911 is most interesting, particularly when viewed in the perspective of time. Dr. James L. Holloway of Dallas, Texas, had just become President of the A.O.A.

Articles in that JOURNAL concerned such subjects as pulmonary tuberculosis, mechanism of anatomic structure, and dysmenorrhea.

The organizational question of the hour was: Should the By-Laws be changed?

The Editor of THE JOURNAL, also from New Jersey, was a friend of your present Editor in his youth. Dr. Harry L. Chiles, of Orange, guided the destiny of your publications 50 years ago.

By-law changes under discussion provided an opportunity for state organizations and osteopathic colleges to send representatives to the meetings of the American Osteopathic Association, with the stipulation, however, that they would not have the right to vote on any question coming before the meeting! At that time the Association was run completely by the Board of Trustees. How things have changed!

Fifty years ago a storm was rising over the Littlejohn College of Osteopathy in Chicago. From the amount of space which the question occupied in the September 1911 JOURNAL, it seemed that the leaders of the profession felt that this was as serious a problem as our present California situation.

One of our colleges vehemently denied rumors to the effect that it was about to close. It was apparently saved by a "voluntary" assessment which raised $50,000.

Twenty-five years ago the American Osteopathic Association welcomed its new President, Dr. John E. Rogers, into office. Dr. Roy G. Hulburt was the Editor of the A.O.A. and Dr. Clayton N. Clark its Business Manager. In Dr. Rogers' inaugural address he warned against the rapidly impending cloud of "socialized medicine." The Executive Secretary, Dr. R. C. McCaughan, reported a total A.O.A. membership of 4,616 members. Central Office, because of termination of its lease, moved to new headquarters at 540 North Michigan Avenue. The question was raised as to whether or not Central Office should have moved to Washington. The net worth of the American Osteopathic Association as stated by its Treasurer, Miss Rose Mary Moser, was $22,798.08. Approval was given for the development for lay distribution of a new brochure concerning the philosophy of osteopathy.

Dr. Edward A. Ward of Michigan was chairman of the Department of Public Affairs and his report stated, "As a group we must continue to recognize and support those forces and factors tending to strengthen our structure and at the same time relentlessly oppose those situations which seriously threaten us." Not a bad statement even in 1961.

Apparently the osteopathic profession was just as interested in changing its By-Laws in 1936 as it was in 1911. At that time, a By-Law provision was being considered to permit representatives to the House of Delegates from affiliated societies of the American Osteopathic Association. This, along with three other proposed By-Law changes and a proposed Constitution change, was rejected by the House of Delegates. In fact, only three By-Law changes were approved.

Moving closer to 1961, the September 1951 JOURNAL carried the Address of President Vincent P. Carroll of California. A few quotations from this address of 10 years ago are curiously interesting. Dr. Carroll stated:

> There are those who, when they come into power, want to prevent all others from entering into the business or profession they dominate. They would and do, to some extent, practice segregation. We, as Doctors of Osteopathy, know only too well how this tactic has been used by the majority school of medicine. *I would hang my head in shame,* just as you would, if I thought for a minute that if we as organized osteopathy had the power of the older school of medicine (note I said *power* not *knowledge!*) we would try to keep any other school of the healing arts from trying to improve the health and care of the public. God forbid that any member or organized group of this great profession ever engage in impeding the development of any organization trying to better the public health and thus rendering a service to our country and to the world! [Italics supplied.]

To quote Dr. Carroll's most interesting words further:

> I am just tired of hearing time and time again that no one knows anything about the sick except those with an M.D. degree. We are willing to cooperate with any group, as I have said, *but we are not going to sell our birth-right for political expediency.* If other groups want to cooperate, we will cooperate; if they do not, we will go on training good doctors and taking care of the sick as well as trying to prevent any association from monopolizing the medical care of the sick and afflicted of this country and the world. [Italics supplied.]

And finally, *only 10 years ago Dr. Carroll, as President of the American Osteopathic Association, said this* concerning co-operation with organized medicine:

> Members of our profession have always stood ready to meet, consult, and cooperate with any group that is confronted with a problem similar to our own and who have as their objectives the care of the sick and the improvement of the health of the people in this nation. *However, let me make it clear to any who might misinterpret such cooperation that neither this organization nor any of its committees, departments, or bureaus, has any idea of becoming or any desire to become a part of an organization which would tend to cause us to lose our identity. We are now, always have been, and will remain an independent and complete school of medicine.* [Italics supplied.]

The memory of man is short.

Dr. Charles L. Naylor—President, 1961-1962

Board and House, 1961

Despite its current problems, this profession can, if it chooses, be entering the greatest era in its history. During these difficult days, we are encouraged by a resurgence of interest in osteopathic principles and in professional development. It is in this direction that we must now point our efforts. It will be in this way that we will reach the zenith in our service to mankind.—True B. Eveleth, D.O., Executive Director, A.O.A.

▶ The American Osteopathic Association held the annual meetings of its House of Delegates and Board of Trustees July 5 to 12 in the Drake Hotel, Chicago. The meeting installed a new president, chose a president-elect, filled vacancies on the Board of Trustees, and acted upon the annual reports of some 50 regular and special committees. All this followed the pattern of many years.

This annual meeting of the A.O.A. however, was different from those of other years. It was the first to be held apart from the general annual convention and it was the first to face the consequences of the defection of one of the Association's component societies.

The overriding business of this meeting was to marshal the forces of organized osteopathy in defense of its life as an independent healing arts profession. This year osteopathy's first concern was to prepare for a long fight ahead.

Year of reaffirmation • More than all else, perhaps, 1961 was a year of reaffirmation. In special and regular orders of business, the American Osteopathic Association once more made its position clear. In debate and decision, it again spelled out its intention to remain a separate and distinct school of medicine.

During a session of the House of Delegates—Close attention is being given to the report at hand by Vice Speaker of the House Philip E. Haviland, left, Speaker Charles W. Sauter, II, presiding, Dr. True B. Eveleth, Executive Director, Dorcas Sternberg, assistant to the Director, and Marie Bierbaum, administrative assistant. Just before this picture was taken, announcement had been made of Dr. Sauter's election as A.O.A. President for 1962-1963, and that Dr. Haviland had been named to succeed him as Speaker of the House.

For your information—

In this month's D.O.: The third of the inserts on week-to-week developments in national osteopathic affairs.
News of the meetings of affiliated societies, held in conjunction with the July meetings of the A.O.A.

In this month's JOURNAL: *Annual reports of Central Office department heads, and of two ad hoc committees; the 1961-62 A.O.A. official roster; listings of osteopathic hospitals and of officials of licensing boards and divisional societies.*

In coming issues of the JOURNAL: *Annual reports of A.O.A. departments, councils, and of The Foundation.*

House and Board action faced up to divisional society schism and rumors of schism, denounced forces working to destroy osteopathic autonomy, and voted to raise a half-million dollar "fighting fund." The Board grappled with organizational complexities arising out of the withdrawal of the California Osteopathic Association, and challenged recent pronouncements of the American Medical Association.

Naylor resolutions • Early in the House sessions, Dr. Charles L. Naylor, Ravenna, Ohio, as chairman of the A.O.A. Steering Committee, introduced into the House six resolutions that laid down the A.O.A. battle lines. Unanimously adopted, these resolutions pledged the profession to:

Resist all effort, external and internal, to destroy osteopathic scientific and political independence; denounce the California Osteopathic Association, the California Medical Association, and the American Medical Association in their efforts to set up a medical monopoly; reaffirm the 1959 Michigan resolution to maintain the profession as a separate and complete school of medicine; accelerate osteopathic research, basic and clinical; render health care to all segments of society at the least possible cost; and to remain willing to confer with the A.M.A., when that body demonstrates its acceptance, at the national level, of the osteopathic profession on an equal and ethical basis.

In its formal policy statement, the Board of Trustees appraised the statement on osteopathy (made by the American Medical Association during its annual meeting in early June) as a guide on how to "divide and conquer the osteopathic profession state by state." (For full statement, see page 40.)

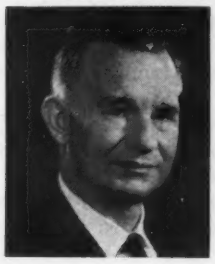
Installation luncheon • At the installation luncheon held in the Drake's Gold Coast Room July 12, Dr. Roy J. Harvey, Midland, Michigan, retiring head of A.O.A., installed Dr. Naylor as President, Dr. Charles W. Sauter, II, Gardner, Massachusetts, as President-Elect, and Drs. Wesley B. Larsen, Chicago, James H. McCormick, Elkhart, Indiana, and A. R. Fuller, Fremont, Ohio, as first, second, and third vice presidents, respectively.

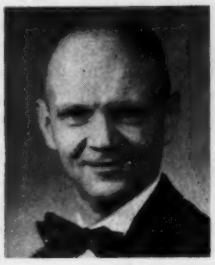
These newly elected trustees also took office: for 3-year terms, Drs. Richard E. Eby, Pomona, California, William L. Silverman, Merion, Pennsylvania, Campbell A. Ward, Mount Clemens, Michigan, Loren R. Rohr, Houston, Texas, and Wallace M. Pearson, Kirksville, Missouri; for 1-year terms, Drs. Herbert L. Sanders, Grand Junction, Colorado, and W. S. Horn, Palmetto, Florida.

Speakers of the House • Dr. Philip E. Haviland, Detroit, who has been Vice Speaker of the House since 1951, was installed as Speaker, to succeed Dr. Sauter, and Dr. Jean F. LeRoque, Des Moines, Iowa, succeeded Dr. Haviland as Vice Speaker.

Credentials Committee—These four members accepted the credentials of the 133 members who were seated in the 1961 meeting of the House of Delegates. They are, from left, Dr. William A. Seeglitz, Newton, Massachusetts; A. R. Fuller, Fremont, Ohio, chairman; Lawrence W. Bailey, Brunswick, Maine; and H. V. Glenn, Stuttgart, Arkansas.

Election of officers—In the annual elections of the House of Delegates in Chicago in July, these officers were chosen: From left, Dr. Charles W. Sauter, II, Gardner, Massachusetts, President-Elect; Drs. Wesley B. Larsen, Chicago, James H. McCormick, Elkhart, Indiana, and A. R. Fuller, Fremont, Ohio, as first, second, and third vice presidents, respectively.





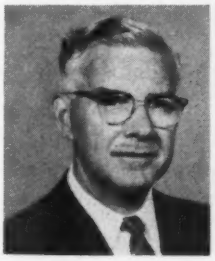
These remaining members of the Board were presented: Drs. J. Scott Heatherington, Gladstone, Oregon; J. Edward Sommers, Clayton, Missouri; William B. Strong, Des Moines, Iowa; J. Mancil Fish, Tulsa, Oklahoma; John W. Hayes, East Liverpool, Ohio; Earl K. Lyons, Chandler, Arizona; Eugene D. Mosier, Puyallup, Washington; and Ira C. Rumney, Kirksville, Missouri.

The President-Elect • Dr. Sauter, who will take office in July 1962, is a general practitioner and a graduate of the Philadelphia College of Osteopathy in the class of 1931. He has served in the House of Delegates since 1944, for 7 years as Vice Speaker, and 11 as Speaker.

As this year's Speaker, he presided over one of the most decisive meetings of the House's 41-year history. It brought the seating of delegates of the new Osteopathic Physicians and Surgeons of California; a unanimous vote immediately to assess each A.O.A. member $75.00; in 1962 to raise A.O.A. annual dues $25.00; and also in 1962, to make both national and divisional membership compulsory.

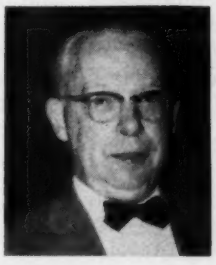
Regional meetings • To facilitate communication between the A.O.A. and its component societies, the House voted for four rather than two Board of Trustee meetings every year, to be held in rotating locations. All members of each region will be invited to attend the Board sessions, and to take part in an additional one-day meeting of questions and answers on Association policy and procedure. The House also called for additional

Trustees for one year—Elected as trustees for one-year terms were Dr. Herbert L. Sanders, Grand Junction, Colorado, left, and Dr. W. S. Horn, Palmetto, Florida.



Trustees for three years—Elected to three-year terms on the Board were, above from left, Drs. Campbell A. Ward, Mount Clemens, Michigan; Richard E. Eby, Pomona, California; Loren R. Rohr, Houston Texas; Wallace M. Pearson, Kirksville, Missouri; and William L. Silverman, Merion, Pennsylvania.

Speakers of the House of Delegates—Dr. Philip E. Haviland, Detroit, left, named as Speaker, and Dr. Jean F. LeRoque, Des Moines, Iowa, Vice Speaker. Dr. Haviland who has been Vice Speaker since 1951, succeeds President-Elect Sauter.



regional meetings of members and A.O.A. officers and trustees who reside in the area of the meeting.

The first two of these conferences are being held in October, one on the fifth, in St. Louis, in conjunction with the annual meeting of the Missouri Association of Osteopathic Physicians and Surgeons, and the second in New York City on the eleventh. This will come at the time the Board of Trustees will be holding the first of the new quarterly meetings, and will just precede the annual convention of the New York State Osteopathic Society. Twelve midwestern states are to participate in the St. Louis meeting, and nine eastern states in the one in New York.

During the annual meeting, Dr. George W. Northup, Livingston, New Jersey, a Past President, was named A.O.A. Editor.

A Past Presidents Council was initiated, with Dr. Robert C. McCullough, Tulsa, Oklahoma, as chairman, and Drs. Carl E. Morrison, St. Cloud, Minnesota, and Dr. Northup as members.

Reporting this year for the first time were the Bureau of Disaster Medical Care, Dr. Raymond W. Hanna, Independence, Missouri, chairman, and the Committee on Health Care for the Aging, Dr. Vernon H. Casner, Kirksville, Missouri, chairman. The Committee on Medical Care Plans, under the chairmanship of Dr. Theodore F. Classen, Warrensville Heights, Ohio, sponsored the highly successful Conference on Health Insurance and Medical Care Plans, held at the Drake on Friday and Saturday, just preceding the House meeting.

This year's activity of the many agencies of the Association—its departments, councils, divisions, bureaus, and committees—is reported by the various chairmen in this and succeeding issues of THE JOURNAL. Covering as they do the profession's activity across the broad front of health care, these reports add another chapter to the contemporary and lively chronicle of osteopathic advancement.

A.O.A. challenges new A.M.A. policy on osteopathy

The American Medical Association, during the meeting of its House of Delegates, held in New York City in June, released a new statement of policy in regard to osteopathy. It rejects the concept of separate, co-operative existence with the osteopathic profession, and gives state medical associations power to determine, at state level, the relationships between M.D.'s and D.O.'s.

When the A.O.A. Board of Trustees met in Chicago a month later, it released a statement that both challenges and refutes the A.M.A. stand. The A.O.A. statement follows:

While it is certainly appropriate for the A.M.A. to "reappraise its application of policy regarding relationships with doctors of osteopathy," it would be equally appropriate for the A.M.A. to examine carefully, for the first time, the realities of osteopathic theory and practice.

It may be true that there cannot be two sciences of medicine, but the A.M.A. fails to recognize that while medicine employs scientific knowledge, the *practice* of medicine is not science, per se.

It is unrealistic to hold that the practice of medicine is pure science. It is equally unrealistic to insist that only one system of medical practice, that system officially approved by a political body, can be valid. The history of medicine is filled with examples of a theory or concept which was boldly denounced by recognized medical leaders only to be proven valid after careful examination, application, and objective evaluation.

The A.M.A. holds that if an individual doctor of osteopathy practices osteopathy he is a cultist and all voluntary professional associations with him are unethical. However, if he bases his practice on the same scientific principles as those adhered to by members of the A.M.A., voluntary relationships with him are ethical.

This policy has two fallacies. First, it assumes that the osteopathic concepts are diametrically opposed to accepted scientific fact and that osteopathic physicians do not employ accepted scientific principles in their practice. Second, it condemns a system of practice without understanding or defining it, or, in fact, defining what *is* accepted scientific medical practice.

There exist today, within all branches of medicine, great differences in approach, theory, and practice. These differences give medicine the vitality and objectivity which are essential in the treatment of patients. Without differences medicine would cease to progress and new advances in scientific knowledge would not be made.

The osteopathic profession believes that these differences should be encouraged, in the best of scientific tradition, so that their ultimate validity can be proven or so that they can be refuted and no longer applied.

The American Osteopathic Association firmly believes that the A.M.A. has chosen to deprecate the osteopathic profession not because of its scientific concepts but for purely political motives.

The A.M.A. *has* recognized that it cannot ignore the osteopathic profession out of existence and that a vast majority of osteopathic physicians will not meekly submit to amalgamation or absorption. The A.M.A. hopes that by granting its state societies the right to decide who shall and who shall not be "legitimate" this profession will be weakened from within and that through internal dissension it will be ultimately destroyed.

The osteopathic profession again declares that it will continue as a separate and complete school of medical practice and that it will resist all efforts to be absorbed, amalgamated, or destroyed, be it through overt political maneuvering or through the guise of making its individual members conform to the scientific dictates of the A.M.A.

FDA steps up fight in misuse of drug samples

▶ Commissioner of Food and Drugs George P. Larrick has called on the pharmaceutical industry, the medical professions, and retail druggists to intensify their efforts to stamp out abuses in the repacking of physicians' samples.

At the same time, the Commissioner directed Food and Drug Administration inspectors throughout the country to increase their activities in this field.
discovery of an additional mix-up

The action came in the wake of in repackaged physicians' samples in the possession of a retail pharmacy in Kansas City, Missouri.

A total of fifteen seizures of physicians' sample drugs that were being held for sale has been instituted by FDA in the last 2 weeks.

Mr. Larrick said that associations representing the industry, the medical profession, and retail pharmacists had expressed their deep concern over the problem, and their willingness to co-operate wherever possible.

"However", he said, "the important protective provisions of the Federal Food, Drug, and Cosmetic Act that are intended to insure the purity and safety of drugs are being ignored and nullified by handlers of physicians' samples.

"While we believe that the major drug supply of this country is entirely reliable, the abuses that have been found in the handling of physicians' samples do represent a serious problem. So, I again call on the drug manufacturing companies, doctors, and druggists to immediately institute necessary control procedures to insure that physicians' samples are used by physicians in their professional practices."

The Commissioner recommended:

1. A reduction in the distribution of physicians' samples of drugs to that quantity which may reasonably be used by physicians in their practice.

2. A system of accounting for drug samples calculated to avoid accumulations and diversion for sale.

3. A policy to be followed by physicians of destroying samples which they do not use in their practice.

4. A practice of not using physicians' samples to fill prescriptions and the use only of drugs, the integrity of which is beyond question in pharmacy practice.

"We intend to use all the resources of the Food and Drug Administration and the full authority of the Federal Food, Drug, and Cosmetic Act to stamp out carelessness and abuses in the handling of physicians' samples," Mr. Larrick said.

The abuses that have been found in the handling of physicians' samples include:

1. Mix-ups—where one drug is in a container bearing the label of another drug.

2. The repackaging of physicians' samples by untrained people who have no concept or appreciation of the importance of maintaining the authenticity and labeling of potent drugs.

3. Destruction of all, or practically all, the labeling which includes warnings, contraindications, directions for use, et cetera.

4. Disregard of the expiration dates on antibiotics—many outdated antibiotics have been found, some on the shelves of prescription pharmacies.

5. Failure to obtain recertification of antibiotics after repackaging, when batches have been mixed and the identity of lots destroyed.

6. The handling of new drugs in such a way as to destroy the identity of codes and labeling.

7. Holding of repackaged samples in unlabeled containers or in containers with labeling loosely affixed to bottles with rubber bands or in containers bearing only the name of the product written in pencil or with crayon.

8. Mixing together of physicians' samples from many sources without regard to codes, expiration dates, age of drugs, et cetera.

Address communications to the A.O.A. Council on Federal Health Programs 1757 K Street, N.W. Washington, D.C.

Bills in Congress

▶ The following bills having to do with health, education, and welfare have recently been introduced into the United States Congress:

H.R. 7500 Mr. Morgan of Pennsylvania. To provide for a Peace Corps to help the peoples of interested countries and areas in meeting their needs for skilled manpower.

H.R. 7571 Mr. McSween of Louisiana. Amends Internal Revenue Code with respect to the deduction for medical and dental expenses in the case of the disabled.

H.R. 7604 Mr. Barry of New York. Academy of American Scholars Act.

H.R. 7756 Mr. Hall of Missouri. Amends Internal Revenue Code to provide additional deductions and exemptions for the expenses of medical care of persons 65 years of age and over.

H.R. 7802 Mr. Fountain of North Carolina. To provide for periodic congressional review of Federal grants-in-aid to state and local units of government.

H.R. 7806 Mr. Brooks of Louisiana. To amend National Science Foundation Act to provide additional criteria for selection of persons for scholarships and fellowships, and

to require additional information on the affidavit filed by each applicant for a scholarship or fellowship.

H.R. 7840 Mr. Wallhauser of New Jersey. Amends veterans laws to provide that the Administrator of Veterans' Affairs shall provide convalescent and nursing home care in facilities provided at Veterans Administration Hospitals.

H.R. 7882 Mr. Curtis of Missouri. To amend Internal Revenue Code to allow a 30 per cent credit against the individual income tax for amounts paid as tuition or fees to certain public and private institutions of higher education or for occupational training or retraining.

H.R. 7904 Mr. Bailey of West Virginia. National Defense Education Act Amendment of 1961. Reported to House July 11, 1961.

H.R. 8029 Mrs. Hansen of Washington. To provide medical care for certain persons engaged on board a vessel in the care, preservation, or navigation of such vessel.

H.R. 8032 Mr. Friedel of Maryland. To amend the Healing Arts Practice Act of the District of Columbia to authorize acceptance of certificates from the Educational Council for Foreign Medical Graduates.

H.R. 8097 Mr. Celler of New York. To deny tax exemption to certain hospitals and similar organizations which discriminate against doctors of medicine.

H.R. 8135 Mrs. Bolton of Ohio. To permit male nurses to receive commissions in the Regular Army, Navy and Air Force.

H.R. 8182 Mr. Montoya of New Mexico. To amend Federal Employees' Compensation Act so as to permit injured employees entitled to receive medical services under such act to utilize the services of chiropractors.

S. 21 Mr. Bennett of Utah for himself and Mr. Moss of Utah. To provide grants to the states to assist them in informing and educating children in schools with respect to the harmful effects of tobacco, alcohol, and other potentially deleterious consumables.

Undivided attention—Dr. Carl E. Morrison, St. Cloud, Minnesota, chairman of the Council on Federal Health Programs, in session of the House of Delegates.

S. 58 Mr. Smathers of Florida. Amends Internal Revenue Code to allow a deduction for certain amounts paid by taxpayer for tuition and fees in providing a higher education for himself, his spouse, and his dependents.

S. 59 Mr. Smathers of Florida. To encourage the establishment of voluntary pension plans by self-employed individuals.

S. 65 Mr. McNamara of Michigan. To provide for the payment of hospital and other health services furnished to aged retired individuals, and to provide for a continuing study of the health needs of such individuals.

S. 182 Mr. Beall of Maryland. To authorize the Administrator of General Services to make grants in cash and land to the Convalescent Hospital of Washington, District of Columbia, Inc., for the purpose of enabling the corporation to establish a convalescent and chronic disease hospital in the District of Columbia.

S. 205 Mr. Magnuson of Washington and others. To expedite the utilization of television transmission facilities in our public schools and colleges, and in adult training programs. Passed Senate March 21, 1961.

S. 278 Mr. Hill of Alabama. Amends Vocational Education Act to extend practical nurse training program until June 30, 1965. Public Law 87-22, approved April 24, 1961.

S. 363 Mr. Magnuson of Washington. To establish a Bureau of Older Persons within the Department of Health, Education, and Welfare.

S. 377 Mr. Sparkman of Alabama and others. To amend Internal Revenue Code so as to encourage the establishment of voluntary retirement plans by individuals.

S. 404 Mr. Humphrey of Minnesota and others. Youth-Conservation Act.

S. 461 Mr. Fulbright of Arkansas. Amends Internal Revenue Code to allow taxpayer to deduct certain expenses incurred by him in obtaining a higher education.

S. 503 Mr. Fulbright of Arkansas. To allow additional income tax exemptions for a taxpayer or a spouse, or a dependent child under twenty-three years of age, who is a full-time student at an educational institution above the secondary level.

S. 585 Mr. Yarborough of Texas, and Mr. Clark of Pennsylvania. College Classroom Assistance Act of 1961.

S. 611 Mr. Hartke of Indiana. To provide for loan insurance on loans to students in higher education.

S. 622 Mr. Bennett of Utah. Amends National Defense Education Act to authorize for teachers in private nonprofit schools certain benefits provided for teachers in public schools.

S. 623 Mr. Kefauver of Tennessee. To establish a United States Department of Science.

S. 635 Mr. Humphrey of Minnesota and others. To establish a program of scholarship aid to students in higher education.

S. 636 Mr. Humphrey of Minnesota and others. Student Loan Insurance Act of 1961.

S. 645 Mr. Hill of Alabama. To authorize grants to assist the states in strengthening professional nurse education, in order to relieve the shortage of well-trained professional nurses and to meet the requirements of Federal, state, and local government hospitals and health agencies, as well as nongovernmental hospitals and other employers.

S. 657 Mr. Kefauver of Tennessee and others. To authorize the establishing by the Surgeon General of an after-care posthospital treatment program for drug addiction.

S. 719 Mr. Javits of New York. To improve the public health through revising, consolidating, and improving the hospital and other medical facilities provisions of the Public Health Service Act, authorizing grants for construction of medical, dental, osteopathic, and public health teaching facilities, providing for Federal guaranty of loans for construction of group practice medical or dental care facilities.

S. 726 Mr. Kefauver of Tennessee. To expand the public facility loan program of the Community Facilities Administration of the Housing and Home Finance Agency. Includes loans to nonprofit hospitals to finance specific projects.

S. 788 Mr. McCarthy of Minnesota. Amends Internal Revenue Code with respect to certain charitable contributions to libraries and to historical societies or agencies.

S. 789 Mr. McCarthy of Minnesota. To amend Internal Revenue Code to exempt nonprofit hospitals from certain excise taxes.

S. 901 Mr. Magnuson of Washington. Marine Sciences and Research Act of 1961.

S. 909 Mr. Anderson of New Mexico and others. To provide for payment of hospital services, skilled nursing home services, and home health services furnished to aged beneficiaries under the old-age, survivors, and disability insurance program. Same as H.R. 4222.

S. 917 Mr. Hill of Alabama. To provide a grant program for the prevention and control of dental diseases.

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S. 937 Mr. Javits of New York and others. To provide for a program of Federal matching grants to the states to enable the states to provide health insurance for individuals aged 65 or over at subscription charges such individuals can pay.

S. 947 Mr. Hill of Alabama. Food Additives Transitional Provisions Amendment of 1961.

S. 955 Mr. Bible of Nevada and Mr. Cannon of Nevada. Amends Hill-Burton Act with respect to transfer of unused allotments.

S. 991 Mr. Dirksen of Illinois for Mr. Goldwater of Arizona. Establishes a National Scholarship Board.

S. 1019 Mr. Byrd of Virginia. To provide for the recovery from tortiously liable third persons of the value of hospital and medical care and treatment furnished by the United States.

S. 1055 Mr. Magnuson of Washington. To amend Federal Employees Compensation Act so as to permit injured employees entitled to receive medical services under such Act to utilize the services of chiropractors.

S. 1071 Mr. Hill of Alabama. To assist in expanding and improving community facilities and services for the health care of aged and other persons.

S. 1072 Mr. Hill of Alabama and others. To increase the opportunity for training of physicians, dentists, and professional public health personnel.

S. 1121 Mr. Young of Ohio. To increase OASDI benefits and increase from $4,800 to $6,000 the maximum amount of annual earnings with respect to which benefits under Social Security may be based.

S. 1130 Mr. Williams of New Jersey and others. To authorize grants for improving domestic agricultural migratory workers' health services and conditions.

S. 1140 Mr. Case of New Jersey. Providing a program of financial assistance to the states for the con-

Discussion between Board sessions—From left, Trustee J. Edward Sommers, Clayton, Missouri, visits with A.O.A. administrative officers Walter A. Suberg, Business Manager, and Kenneth L. Ettenson, Treasurer.

struction of public community colleges.

S. 1143 Mr. Dodd of Connecticut. Amends Internal Revenue Code to allow an additional income exemption of $1,200 for an individual who is a student at an institution of higher education.

S. 1158 Mr. Humphrey of Minnesota. To assist voluntary nonprofit associations offering prepaid health service programs to secure necessary facilities and equipment through long-term, interest-bearing loans.

S. 1223 Mr. Humphrey of Minnesota. Amends Social Security Act to define more specifically the term "prescription services" which may be provided under state programs of medical assistance for the aged, established under Title I of the Social Security Act.

S. 1225 Mr. Humphrey of Minnesota. Amends Title I of Social Security Act so as to assure freedom of choice of physicians and other providers of medical services by individuals who are recipients of assistance under state programs of medical assistance for the aged established pursuant to such title.

S. 1227 Mr. Bush of Connecticut. Amends National Defense Education Act to authorize the granting of national defense scholarships.

S. 1228 Mr. Bush of Connecticut. Extends National Defense Education Act an additional five years to June 30, 1968.

S. 1232 Mr. Case of New Jersey. To provide assistance to the states in certain surveying and planning with respect to college facilities.

S. 1241 Mr. Hill of Alabama and others. College Academic Facilities and Scholarship Act.

S. 1322 Mr. Burdick of North Dakota. Amends Federal Employees Compensation Act to authorize chiropractic services.

S. 1353 Mr. Humphrey of Minnesota. To authorize a five-year program of grants and scholarships for collegiate education in nursing.

S. 1359 Mr. McNamara of Michigan and others. Establishes a United States Office of Aging within the Department of Health, Education, and Welfare to be headed by an Assistant Secretary for Aging.

S. 1393 Mr. Humphrey of Minnesota. To authorize a ten-year program of grants for construction of veterinary medical educational facilities.

S. 1552 Mr. Kefauver of Tennessee. To amend and supplement the antitrust laws with respect to the manufacture and distribution of drugs.

S. 1566 Mr. Case of South Dakota. To establish a chiropractic section in the Medical Service Corps of the Army.

S. 1586 Mr. Jackson of Washington. To provide for a method of payment of indirect costs of research and development contracted by the Federal government at universities, colleges, and other educational institutions.

S. 1693 Mr. Javits of New York and others. To provide for the general welfare by assisting the states, through a program of grants-in-aid, to establish and operate special hospital facilities for the treatment and cure of narcotic addicts.

S. 1694 Mr. Keating of New York and others. To enable the courts more effectively to deal with the problem of narcotic addiction.

S. 1726 Mr. Hill of Alabama. To extend and improve the National Defense Education Act.

S. 1762 Mr. Bible of Nevada. To regulate the practice of physical therapy in the District of Columbia.

S. 1863 Mr. McNamara of Michigan. To provide for the establishment of a Senior Citizens Service Training Program.

S. 1922 Mr. Sparkman of Alabama. Housing Act of 1961. Increases revolving loan fund for construction of college student dormitories, intern and student nurse housing, and the size of loans available for construction of proprietary nursing homes. Also extends to nonprofit hospitals credit for expenditures made by the institutions within or in the environs of urban renewal projects. Public Law 87-70 approved June 30, 1961.

S. 1939 Mr. Dodd of Connecticut and Mr. Wiley of Wisconsin. Regulating the manufacture, compounding, processing, and distribution of habit-forming barbiturates and amphetamine drugs.

S. 1991 Mr. Clark of Pennsylvania and others. Manpower Development and Training Act of 1961.

S. 2000 Mr. Humphrey of Minnesota and others. Peace Corps Act.

S. 2063 Mr. Cooper of Kentucky and others. To establish a President's Advisory Council on Education.

S. 2119 Mr. Kerr and Mr. Monroney of Oklahoma. To permit donations of surplus property to schools for the mentally retarded, schools for the physically handicapped, educational television stations, and public libraries.

S. 2191 Mr. Case of South Dakota. To provide for safety belts on motor vehicles sold in interstate commerce.

S. 2207 Mr. Miller of Iowa. Amends Internal Revenue Code relative to scholarship and fellowship grants.

S. 2269 Mr. Hill of Alabama and Mr. Kerr of Oklahoma. Provides for the establishment of an Institute of Child Health and Human Development, and an Institute of General Medical Sciences, in the National Institutes of Health.

S. 2273 Mr. Kerr of Oklahoma and Mr. Hill of Alabama. To authorize grants, contracts, and jointly financed cooperative arrangements for research relating to maternal and child health services and crippled children's services, by amendment of part 4 of Title V of the Social Security Act.

Annual Reports—Central Office—Ad Hoc Committees

True B. Eveleth, D.O.
Executive Director

Report of the Executive Director

▶ This is an annual report, a report of the state of the Association, of the profession, and of some extraneous factors which influence the status of organized osteopathy.

California capitulation • During the past year, much of the attention of the Board of Trustees and the Central Office staff, as well as of many others, has been directed toward the unfortunate capitulation of osteopathy in California. The House of Delegates was called in special session last January. The California defection has been costly to the profession from many standpoints, and the damages still mount.

The proposed liquidation of osteopathy by joint action of the California Medical Association and the California Osteopathic Association has progressed from the planning stage through the signing and ratification of a pact, the enactment of enabling legislation, and the agreement to surrender the osteopathic college. Still pending are court action or actions and the vote of the people of California, either of which could stop, or delay, the elimination of osteopathy in that state.

In April, the newly chartered divisional society, Osteopathic Physicians and Surgeons of California, filed a complaint in the Superior Court of the State of California in Los Angeles County, protesting many facets of the C.O.A.-C.M.A. agreement.

This action amounted to a plea for permanent injunction to stop the merger on the grounds that it was illegal. At the same time, a plea for temporary injunction was filed to stop further activities toward fulfilling the merger agreement prior to the trial on the complaint. The plaintiff, O.P.S.C., contended that irreparable damage would result from such activities. This petition was denied by the judge's decision that irreparable damage would not necessarily occur and that, if actions were taken which would cause such damage, the court would consider the petition.

Trial pending • This trial, on the complaint and the petition for permanent injunction, is now pending. Issues are on the legality of the several provisions of the signed agreements to merge. The defendants, C.O.A. and C.M.A., filed demurrers to the complaint on June 6, admitting, in a sense, the facts contained in the complaint, but denying that they are illegal.

The court hearing on the demurrer is scheduled for July 17. The decisions rendered then will establish the opinion of that court as to the legality of each of the charges in the complaint. Actual trial proceedings on the complaint would then be scheduled several months later. The opinions rendered on the demurrers will influence the preparation for the pleadings at the subsequent trial.

Whether or not the court will grant relief by forbidding further implementation of all or part of the agreement cannot be foretold. Such issues are not black nor white, and court decisions are usually appealed by the losers until the Supreme Court rules with finality.

California's basic problem • The basic problem facing this profession in California is not a legal one, and cannot be resolved by the courts. A significant number of D.O.'s are intent on acquiring an M.D. degree and are willing to accede to the terms dictated by a power which is solely interested in the elimination of osteopathy and the acquisition of the Los Angeles college. While the courts may find against the manner in which the parties have agreed to consummate their contract, it will not alter the interests of the defendants, nor prevent their continued search for a means to the desired end.

In order to create an atmosphere in which such a deal could be made, many real and important values had to be destroyed. The

Above and on facing page a session of the A.O.A. Board of Trustees during their annual meeting—Above, at head of table, Luise van Hook, administrative assistant; President Roy J. Harvey, Executive Director True B. Eveleth; Dorcas Sternberg, assistant to Dr. Eveleth; and Marie Bierbaum, administrative assistant. Across from Miss Sternberg Martin Katz, who first came to the House as its stenotypist in 1952; at right, Drs. Galen S. Young, Eugene D. Mosier, J. Mancil Fish, Herbert L. Sanders, Lydia T. Jordan, and J. Scott Heatherington.

value of osteopathy itself, the quality of osteopathic education, the sincerity of leaders within the profession, and many other factors had to be distorted. This has been done and little is left of matters osteopathic, in fact or in the minds of Californians.

Several resolutions have been presented for Board and House consideration with the purpose of placing safeguards in the by-laws which would prevent an osteopathic college or divisional society from defecting from the objectives or policies of the A.O.A. Whether such action is wise poses one question to be considered. It must be borne in mind that no amendment to the A.O.A. by-laws would affect or alter the autonomy of a college unless the by-laws or charter of the college included like provisions.

The ability of this profession to protect itself against the outside forces now massed to destroy it depends upon whatever unity, determination, and conviction exist within the profession. In such a siege as the profession now faces, there has to be an extraordinary brand of determination and conviction which more than matches that of the attacking forces. Let there be no mistake about the determination of the attacking forces. The C.O.A. has maintained consistently that the other states will follow the California plan and has contended that many states are ready to secede. C.O.A. is propagandizing the nation and offering M.D. degrees and traveling counsel to anybody, anywhere. The C.M.A. has repeatedly said that the A.M.A. is in full accord, and A.M.A. leaders have predicted that other states will follow the California pattern.

D.O. beachhead • A nucleus of D.O.'s with principles and courage has established a beachhead for the purpose of preserving the rights of the public, the continuation of osteopathy as a profession, and a place for those who wish to remain osteopathic physicians and surgeons. There are, I am sure, hundreds of others with like principles, but who lack the courage to be so counted. Many factors create a climate of apprehension which is difficult for free Americans to comprehend. A combination of ruthlessness, craftiness, distortion of facts, and downright falsehoods, backed by Machiavellian justification of unscrupulous means to gain a desired end, is beyond the comprehension of most practicing physicians.

The devastation is great, and in many areas irreparable. Our attention to the matter comes late, since the secret negotiations were uncovered a short 2 years ago. The A.O.A. is severely criticized, both for interfering in the affairs of California and for not preventing the disaster. Recriminations are natural and inevitable, although useless and destructive. Recrimination is the easiest way to participate in a serious problem, but usually it is the only contribution made by those who resort to it.

"Any and all means" • Osteopathy as a school of medicine has, through its national and state organizations, declared its determination to continue its existence. The House of Delegates of the American Osteopathic Association has directed the Board of Trustees "to continue to use any and all means possible to assure the continuation and development of the osteopathic profession and its educational institutions in the State of California in the public interest." The Board has conscientiously attempted to carry out that assignment. Assistance has been given the Board by many individuals, considerable money has been expended, and more is committed in the interest of salvaging everything possible. Some D.O.'s in California have spent more time and money than they could afford, but too few of their colleagues have backed them or even encouraged their efforts.

At this moment, when every eye should be focused on our objectives, there is no time for selfish indulgence. We must realize that our preferences have to be weighed against the problem we are trying to solve, or they will become a part

Continuing around the "square"—From left, Drs. Charles W. Sauter, II, George W. Northup, W. S. Horn, Campbell A. Ward, Richard E. Eby, Loren R. Rohr, J. Edward Sommers, William B. Strong, Ira C. Rumney, and Charles L. Naylor. In background, from left, Central Office staff members Leonard Heffel, Robert A. Klobnak, Harry A. Lichty, D.O., and Kenneth L. Ettenson. Not pictured are Board members Earl K. Lyons, Wesley B. Larsen, John W. Hayes, James H. McCormick, Robert D. Anderson, and Wallace M. Pearson.

of the problem. I plead for closer, more harmonious attention to the purposes for which we are organized. The forces to destroy osteopathy have extended beyond the borders of California and have invaded many states. These are organized forces encouraged by the apparent successes in California, and the lesson learned that destruction of osteopathy can be accomplished through a conspiracy with disloyal members.

Effective defense • Determination to defend itself against destructive forces means active defense, wherein all segments of the osteopathic profession—its schools, specialty colleges, affiliated bodies, as well as individual members—merge in the common interest. All must realize that to pursue individual interests dilutes the united front and thus the effectiveness of the defense.

Associations such as A.O.A. do not operate with the efficiency of commercial enterprises. Voluntary service, regardless of its dedication, enjoys an independence that would ruin a business corporation very quickly. No bulletin of a branch office of the Standard Oil Company constantly contends that the Standard Oil Company is stupid, and that its directives should be ignored. No such bulletin cheers another branch office for pushing a competitive line. A voluntary association is dependent upon the determination of its membership to exist and to further the purposes for which it was organized. Without this, no association can withstand the stress of an organized attack. If the osteopathic colleges, the divisional societies, and the other groups related to A.O.A. will not unite in a common front, the A.O.A. cannot protect the profession.

Realism must dominate • It is apparent, as the House of Delegates and the Board of Trustees of this Association meet in July, 1961, that realism must dominate the deliberations. It is probable that we have lost some 1,700 members, one school, many hospitals, and considerable prestige in a great state.

However, cognizance must also be given to the fact that this loss is of inventory items which we counted, but really did not have. The college has not turned out osteopathically oriented graduates for many years. These doctors, although possessing D.O. degrees, have had little interest in osteopathy, have not practiced osteopathy, nor contributed, except through dues, to the development or acceptance of osteopathy. One stalwart layman, basically interested in osteopathy in California, said that these D.O.'s should have M.D. degrees—they are not osteopathic doctors, do not want to be, and provide no osteopathic care to the public.

Despite its current problems, this profession can, if it chooses, be entering the greatest era in its history. There is concrete evidence that philanthropy will support osteopathic education, primarily because of its distinctive contribution. During these difficult days, we are encouraged by friends we did not know we had and, within the profession, by a resurgence of interest in osteopathic principles and in osteopathic professional development. It is in this direction that we must now point our efforts. It will be in this way that this profession will reach the zenith in its own development and in its service to mankind.

Membership • Last July we reported that as of June 1, 1960, A.O.A. membership totaled 10,867. As of June 1 this year, the count is 11,114, an increase of 247. This represents an all-time high. If we lose those members in California who have not joined O.P.S.C., our membership could drop to 9,500, which is about where it was 5 years ago.

We should not consider this as too serious a setback. If we can gain back that numerical loss in the next 5 years, and have members who are proud of their degrees and interested in the future of osteopathy, we will be better off than

we have been in carrying dissatisfied and undermining members on our rolls.

Federal legislation • We note a growing desire by divisional societies and individual members in regard to "taking a stand" on federal legislation which is related to health. Organized medicine is becoming more and more characterized by its opposition to legislation in health care.

The public image of A.M.A. becomes more grotesque each year, and A.M.A. influence, in national affairs concerning health care, dwindles. The A.O.A. policy is not one of neglect or disinterest, but has been carefully designed to refrain from expressing authoritative conclusions on matters about which physicians are not authorities. The A.O.A. has contended that it should concern itself with the quality of health care whether it be for labor, the aged, the indigent, or any other classification of the public. The socioeconomic details would be left to the sociologists, economists, legislators, and the public. If the A.O.A. policy is sound, perhaps it should be more broadly publicized. If it is unsound, it should be changed.

Furthermore, in these matters, we must be constantly reminded that as a 501(c)(3) educational, charitable, and nonprofit organization, we are not permitted to influence legislation, which includes:

a. Contacting, or urging the public to contact, members of a legislative body for the purpose of proposing, supporting, or opposing legislation; or

b. Advocating the adoption or rejection of legislation.

Medical manuscripts • THE JOURNAL continues to be hampered by a scarcity of original manuscript material which contributes to medical literature. As a scientific publication, THE JOURNAL is necessarily restricted in its selection to papers submitted. Perhaps there has been a policy at some time which tended to discourage the submission of original material by our people. Several plans have been tried to help the situation. One, of long-range potential, is the medical writing instruction program at the colleges. Last year we sponsored such a plan, the details of which will be reported by the associate editor. I will recommend continuance of the program for the coming year.

The Committee on A.O.A. Publications has recommended that all specialty boards require that a paper suitable for publication be submitted by each applicant for certification. One board cooperates fully; two to some degree; the others ignore the request. One states that such a requirement is not in keeping with the purposes and functions of that board. I have no recommendation in this matter and report it for your information.

Seattle exposition • By majority decision of the Board of Trustees, the A.O.A. will not prepare an exhibit for the Century 21 Exposition to be held in the State of Washington in 1962. Many members of the Board were of the opinion that such an exhibit would be good public relations, but at this time such an expenditure of funds is not justified.

Health agencies • I will recommend that a contribution be made to the National Public Relations Council of Health and Welfare Services, Inc. It is felt that this is an important "in" to the various health organizations. Last year the organization's executive director cooperated in our Forum on Communications.

Recommendations • 1. That a budgetary item of $3,000 be made for continuance of the medical manuscript seminars for the year 1961-62. 2. That a contribution of $300 be made to the National Public Relations Council of Health and Welfare Services, Inc.

Committee on Aging—During the annual A.O.A. meetings at the Drake Hotel in July, Dr. Vernon H. Casner, Kirksville, Missouri, chairman, called a meeting of the Committee on Health Care for the Aging. Present were Drs. A. R. Fuller, Fremont, Ohio; Dr. Robert D. Anderson, Philadelphia, chairman, Bureau of Public and Industrial Health, under which the committee functions; Dr. Casner, and Dr. Richard S. Koch, Olympia, Washington.

Walter A. Suberg
Business Manager

Report of the Business Manager

▶ Advertising income from THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION and from D.O. for the 1960-61 fiscal year was the largest in A.O.A. history.

Advertising in 1960-61 • During this year most medical publications have had a serious cutback in advertising because of Senate investigations of the pharmaceutical industry. The slight recession that was experienced by general business also added to the problems of medical publications. In addition, as far as the official publications of the A.O.A. were concerned, a factor that created selling problems was the inclusion for the first time of osteopathic physicians on the mailing lists of two more medical publications, *Modern Medicine* and *Physicians' Management*. Each time another medical publication includes osteopathic physicians on its mailing list, a decline in advertising income can be counted on.

However, even though these obstacles were presented, we were able to increase income by $12,698.48 over 1959-1960.

1961-62 income • The coming year presents many problems, as you all know, because of the elimination of a certain number of members. This will directly affect the circulation of the official publications. We anticipate a lowered income from JOURNAL advertising. It is possible for us to lose $50,000, if not more. However, I think D.O. will hold its own, and we estimate that its 1961-1962 income from advertising will reach $100,000.

Our efforts this year will include more direct-mail promotion for the official publications. This will demand much more travel on my part.

A.O.A. Directory • The 1961 DIRECTORY had the largest income ever, due to an increase from advertising and from the royalty-fee program, established approximately a year ago. Advertising income for the 1960-61 fiscal year amounted to $7,270, and income from royalty fees, sale of the DIRECTORY, and supplemental directory service amounted to $40,552, totaling $47,823.

Here again, with the probable drop in membership, royalty-fee income will drop accordingly. It is our intention, in January, to raise this fee from $1.00 to $2.00 for each 1,000 names addressed. This increase should bring in an additional $30,000.

Convention exhibits • Exhibit sales were successful in Miami Beach, totaling $27,400. If the exhibit space income we anticipate from the Las Vegas convention materializes, it will be the highest in A.O.A. convention history.

Below is a 3-year chart of income and expense that comes within the area of responsibility of the Business Office. The gross income from all these areas totals $791,298.14. This is an increase of $65,592.64 over last year.

THREE-YEAR CHART OF INCOME AND EXPENSE

	1958-1959	1959-1960	1960-1961
THE JOURNAL			
Income: advertising	$422,798.00	$590,165.25	$554,813.35
Income: sales	3,036.38	3,370.07	2,987.83
Expense	(233,358.37)	(337,636.84)	(324,964.17)
D.O.			
Income: advertising	33,696.51	50,804.00	98,854.38
Income: sales	138.61	189.77	140.96
Expense	(59,183.67)	(88,872.88)	(140,083.01)
DIRECTORY			
Income: advertising	6,543.30	6,900.00	7,270.00
Income: sales	4,023.55	17,658.60	40,553.00
Expense	(15,978.37)	(20,652.96)	(18,327.18)
HEALTH			
Income	18,307.11	16,926.41	16,779.30
Expense	(33,544.92)	(37,477.13)	(35,039.95)
Literature and resale items			
Income	12,098.81	13,466.40	14,174.32
Expense	(9,164.20)	(20,783.53)	(11,611.50)
Commercial exhibits	Washington	Chicago	Kansas City
Income	21,075.00	26,225.00	28,325.00
Expense	(6,848.62)	(6,058.63)	(7,350.96)
			Miami Beach
Income			27,400.00
Expense			(5,532.28)
Building			
Expense	(16,409.60)	(15,877.26)	(15,809.49)
Personnel procurement			
Expense	(604.13)	(2,211.55)	(1,993.79)
Office equipment and furnishings			
Expense	(9,354.45)	(6,328.90)	(4,418.72)
Office printing and supplies			
Expense	(14,508.46)	(14,260.48)	(15,820.57)

Katherine Becker
Associate Editor

Report of the Editorial Department

▶ The editorial department has completed another year's work, largely without a D.O. editor. Dr. William Brandt, who was with us as Acting Editor, left the office early in November. However, with the help of a capable, conscientious staff, the functions of the department have been carried on, and there are positive accomplishments to be reported.

The status of the four publications will be commented upon individually:

The Journal • Volume 60, which began with the September 1960 issue, has continued with the format as revised in September 1959. It has been printed since November 1960 by Neely Printing Company, who took over from Pioneer Publishing Company. This company had printed THE JOURNAL for 35 years. The new printers have worked hard and cooperatively, and the change-over was accomplished with a minimum of difficulty.

The number of reader pages has remained almost exactly the same as last year, but the ratio of reader to advertising pages has improved since ad pages have decreased in number.

The supply of articles has been much better this year, and the quality of material has been good. As in the past several years, the master's theses from the Philadelphia College of Osteopathy and theses from the American Osteopathic Board of Radiology have been important sources of material. Papers required from recipients of educational grants have been coming in greater numbers, and they are excellent. Dr. John W. Mulford, chairman of the A.O.A. Committee on Mead Johnson Grants and of the Committee on Educational Grants of the National Osteopathic Foundation, has been tireless in his efforts to obtain these papers for JOURNAL use.

The membership committee of the American College of Osteopathic Surgeons has made available to THE JOURNAL a number of volumes of case reports submitted as partial fulfillment of the requirements for membership in the College. These reports were received only recently, but it is believed that some of their content can be made into good JOURNAL articles.

A number of the specialty colleges are initiating programs of awards for papers in their fields. Among them are the College of Obstetricians and Gynecologists, the College of Ophthalmology and Otorhinolaryngology, and the College of Surgeons.

These developments indicate a growing sense of need to produce and publish good scientific material. This feeling has not been confined to organizations, for the number of good manuscripts submitted by physicians directly has been larger this year than in the past.

All of the above is pertinent to the Seminars on Medical Writing which will be commented on later.

D.O. • Volume 1, Number 1, of "A Publication for All Physicians and Surgeons, D.O."—referred to as D.O.—came off the presses bearing the date September 1960. Thus, a newly designed publication with a new name replaced THE FORUM OF OSTEOPATHY, which had been the profession's news magazine for 34 years. The new publication was designed to improve readability, which was accomplished by the selection of a new and larger typeface, make-up calling for more white space, and increased use of pictures. The contents of D.O. are essentially the same as those of THE FORUM.

The most notable difference between the new D.O. and THE FORUM is the increased bulk. The nine issues of D.O. published during the 1960-61 fiscal year averaged 125 pages, as compared to the average 76-page FORUM of 1959-60. The ratio of advertising pages to reader pages is much greater in the new publication, and advertising income much more. Comments received from members of the profession have been unanimously favorable.

Essentially, D.O. reports news of the affiliated societies of the A.O.A., osteopathic hospitals, and the profession's colleges. As did THE FORUM, it publishes obituaries, news about individual D.O.'s, and special articles. Wherever possible, D.O. treats the story from the divisional society angle.

From its first issue, D.O. has been publishing case reports supplied primarily by interns and residents at teaching hospitals of four osteopathic colleges: Chicago College of Osteopathy, Kansas City College of Osteopathy and Surgery, Kirksville College of Osteopathy and Surgery, and Philadelphia College of Osteopathy. A few reports have also been accepted from physicians in practice and from interns in other osteopathic institutions. A nominal fee has been paid for each report. It has been difficult to obtain six case reports for each issue, even when specifically assigned.

The new "General Practitioners" section contains material officially released by the American College of General Practitioners in Osteopathic Medicine and Surgery. It serves as the ACGP's official publication in the interim that this organization does not issue its own bulletin.

During the current year, the "Hospitals" and "Divisional Societies" departments have had the most comprehensive coverage in their history because conscientious contributors sent in news and pictures, and periodical reminders were sent from the editorial department. A special effort has been made to keep the profession informed about the vigorous activity in the hospital field, such as new construction, expansion, and plans for future building.

The "Education," "Affiliated Societies," and "Specialty Bodies" sections have not received the coverage they deserve because of the lack of copy submitted by institutions and organizations in these categories. The Auxiliary to the A.O.A. has submitted monthly articles to keep the profession informed about its activities and projects. Contributions to the "Letters to the A.O.A." section trickled in at the beginning of the fiscal year, but have picked up considerably in the last few months. The California situation provoked a number of letters.

Health • Despite its dropping circulation, HEALTH, the Association's only periodical for the lay reader, continues to be favorably received by lay readers, some segments of the profession, and other health agencies. Letters praising individual articles or the magazine in general far outnumber unfavorable communications. The few letters that criticize the magazine have a common complaint: not enough osteopathy.

In the past year, the department has made a concerted effort to include more about the osteopathic concept in HEALTH. During his few months as Acting Editor, Dr. Brandt provided material and direction to this end. The lack of an Editor has been especially felt in this area.

Again in 1960-61, we had to rely heavily on buying articles for HEALTH from writers in the open market, as well as from those assigned to write on specific subjects. Fifteen free-lance articles and eleven assigned articles were purchased; eleven were staff-written, and seven were D.O.-contributed.

Some headway is being made in building up a backlog of articles. Nevertheless, there continues to be a need for help from the profession in providing finished articles as well as source material from which staff members can prepare manuscripts.

Yearbook and Directory • The fifty-third edition of the DIRECTORY was mailed in January. Although its size and shape have not altered greatly, there have been many changes in its make-up, all to make it a more efficient reference tool.

Medical writing seminars • Last year, in the editorial report, I recommended that the A.O.A. provide qualified personnel to conduct intensive teaching courses in medical writing at osteopathic colleges, upon request of the colleges. The recommendation was approved and a budgetary allowance was made to carry out the project. The Committee on Publications gave advice and support. Getting the arrangements made and the materials ready was a big task, but it was accomplished and, it is gratifying to report, five of the six colleges requested seminars. Mrs. Ruth Good, formerly of the editorial department, and still doing free-lance work for it, went to the Des Moines, Kansas City, Kirksville, and Philadelphia colleges. Since we were able to schedule the first three seminars the same week, travel expenses were cut to a minimum. Miss Barbara Peterson, JOURNAL manuscript editor, made the presentation at the Chicago College. Interest in the teaching of medical writing has been intense, and reception of the lecturers was most cordial. Audiences varied in make-up, but many students and faculty members with special aptitudes were reached. Requests have been received for extension and elaboration of the seminars, and it is believed that with the materials already collected and the experience gained by both the teachers and the colleges, further seminars can be scheduled and presented with greater effectiveness.

New Editor—Dr. George W. Northup, right, is congratulated by Dr. Wesley B. Larsen, Chicago, on his appointment as A.O.A. Editor. Dr. Larsen is chairman of the Committee on A.O.A. Publications.

Several state societies and specialty colleges have expressed interest in the teaching of medical writing as program features. I believe that discussion of the seminars and preparation for them have focused attention on medical writing which is already having a good effect. I believe also that there are many angles as yet unexplored and many benefits unrealized.

Recommendation • That the A.O.A. provide qualified personnel to continue intensive teaching courses in medical writing at osteopathic colleges, upon request of the colleges.

Lawrence W. Mills
Director

Report of the Office of Education

► In 1960 only 75 first-year students matriculated at the Kansas City College of Osteopathy and Surgery. For years the school has been admitting first-year classes of 100. Most of the cancellations were accounted for by failure to complete certain prerequisites for admission or to maintain required grade levels. Acceptances had been granted to 110. Other dropouts or postponements were due to lack of money or last-minute decisions to attend another osteopathic college nearer home.

In 1959, Philadelphia College of Osteopathy similarly was hard hit when 23 successful applicants failed to matriculate. Consequently, there were 14 empty places in that college in 1959.

In 1960, PCO started the year with 11 more students than its expected class of 80. The comparatively small entering class at Kansas City accounts for the over-all decrease of 9 entering students from the number who entered in 1959.

The 1960-61 enrollment of 1,944 for the six osteopathic colleges shows an increase of 29 over the enrollment of 1959-60, and is the largest in the history of osteopathic education. This is due to our largest fourth-year class of 506. The over-all enrollment of 1961-62 will show a decrease of about 35 students.

The number of applicants for the 1960 entering class did not show a decrease. There were 1,367 applicants reported by the six colleges. The quality of the applicants showed a definite scholastic improvement over those of 1958 and 1959.

Status of the premedical student pool • Based on my findings in undergraduate college visits during the year, and on written reports from premedical advisors, it is safe to say that the number of first- and second-year college students who are interested in medicine in general and in dentistry is on the upswing. Undoubtedly, the high school recruiting program of the National Health Council, started 6 years ago, has had a great deal to do with this. Most vocational guidance projects conducted by osteopathic state and district societies have been directed to high school counselors, teachers, and students. This is starting to pay off. The *Life* article also has definitely contributed to the increase of applicants for this fall. The article also did much to cement the field work that has been carried on in undergraduate colleges by osteopathic college presidents and the director.

In undergraduate college visits during the year, no mention was made of the California situation until after the *Time* article regarding amalgamation in California and possible amalgamation on a national level. Eight colleges and universities were visited after the article appeared. In six of those visits, either the deans or premedical advisors indicated that they were aware of what was going on.

The most prevalent reaction to amalgamation in California was very well summed up by the premedical advisor at Knox College in Illinois. In an informal talk with several other professors, he said that the osteopathic profession has done a tremendous job during the past 15 years in developing its educational facilities; that for years the American Medical Association has criticized the osteopathic profession, chiefly on the basis of inferior educational standards; that now, with very little help from outside, the osteopaths have so developed their colleges that the A.M.A. wants to take them over.

In six of the eight colleges visited, hope was expressed by premedical advisors that the profession would remain independent. It is interesting to note that none of the osteopathic college admissions reports show any interest whatsoever on the part of applicants regarding the possibility of an M.D. degree.

Entering students • We still draw 70 per cent of our students from 6 states. It is believed that with a little extra effort, all of these states, with the exception of California, can show an even greater number of entrants. Pennsylvania and New York are in the top 6 states, and we are working to increase the number of entrants from the other eastern states, and from such midwestern states as Illinois, Indiana, and Kansas.

The southern states are interested in a southern college of osteopathy. So far, however, there has been no increase in students from such states as Florida, North Carolina, South Carolina, Mississippi, Alabama, and Louisiana.

Action in Texas • The number of applicants from Texas and Oklahoma is definitely on the increase. This is due largely to two factors: first, the complete coverage of all Texas undergraduate colleges by Dr. Phil R. Russell, Fort Worth,

OSTEOPATHIC COLLEGE ENROLLMENT 1961-62

College	First-Year Students	Second-Year Students	Third-Year Students	Fourth-Year Students	Total
CCO	68	64	53	63	248
COMS	71	72	66	73	282
COPS	94	98	85	99	376
KC	75	103	99	107	384
KCOS	97	83	87	85	352
PCO	91	65	67	79	302
	496	485	457	506	1,944

secretary of the Texas Association of Osteopathic Physicians and Surgeons, and by President Morris Thompson, of the Kirksville College of Osteopathy and Surgery; second, to in increase in vocational guidance and student recruiting on the part of several osteopathic districts in Oklahoma.

We must continue to direct our long-range program to high school teachers and students. A "speed-up" program for undergraduates is also urged. This calls for more active individual participation on the part of doctors.

The new film "American Doctor" is excellent, and has received "rave" notices by every group which has seen it. The showing of this film to high school and college audiences and to other groups of the lay public undoubtedly will pay off, not only in public recognition but in the number of applicants to our colleges.

Osteopathic vocational guidance programs • President Thompson spent 3 weeks in Texas. He visited most of the undergraduate colleges and spoke to a number of district meetings to which high school counselors and premedical advisors were invited. Dr. Russell and the Texas association are commended for this program.

President McLaughlin of the College of Osteopathic Medicine and Surgery also has done an outstanding job in covering a large part of Kansas. Lloyd L. Hall, executive secretary of the Kansas State Osteopathic Association, accompanied him. Their visits included Kansas colleges and a number of Kansas high schools.

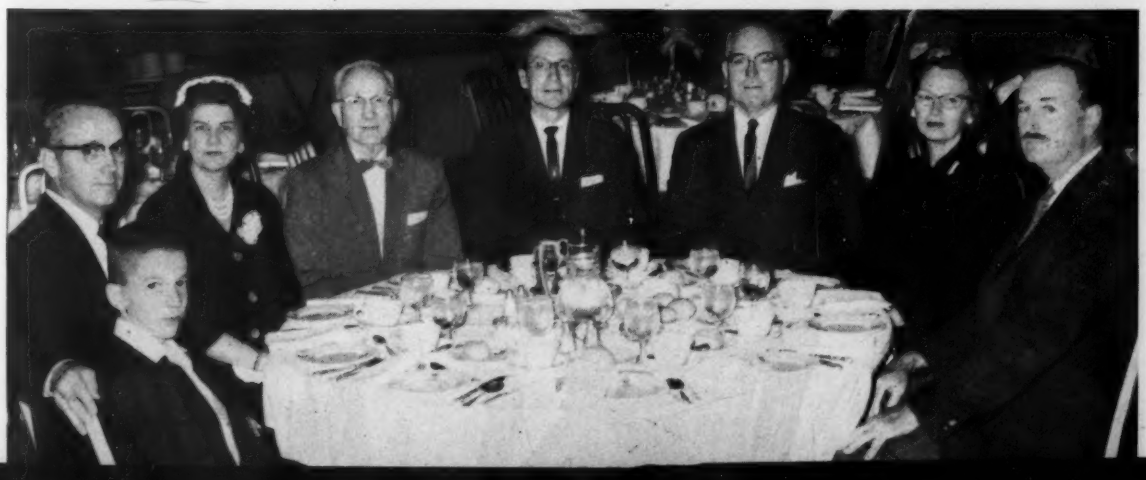
Dr. McLaughlin was also a member of the Florida team which met with large groups of editors in Jacksonville, Tallahassee, Tampa, and Miami. He represented the profession in a similar meeting in Milwaukee, Wisconsin.

President Richard N. MacBain of the Chicago College met with a large premedical group at the University of Notre Dame, Notre Dame, Indiana. Dean Robert A. Kistner, also of CCO, represented the profession at a highly successful vocational dinner held in South Bend, Indiana, and at the annual Vocational Guidance Day for Chicago High Schools, held at the Illinois Institute of Technology.

From the Philadelphia College, Sherwood R. Mercer, dean, and Thomas M. Rowland, Jr., director of admissions and registrar, met with three college premedical groups. The Kansas City College has developed a successful program of

At the installation luncheon—At left, Dr. Galen S. Young, standing, Immediate Past President, presents outgoing President Roy J. Harvey and Mrs. Harvey with a silver tea and coffee service as a token of the Association's gratitude for a year of outstanding service to the profession.

Below: Luncheon guests, from left, Teddy Ross, Dr. Eugene F. Ross, and Mrs. Ross, all of Lindsay, Oklahoma; Dr. Ray H. Thompson, Vinita, Oklahoma; Dr. Percy R. Riemer, Pawnee, Oklahoma; Dr. John P. Wood, Birmingham, Michigan; Mrs. J. Vincent Murphy and Dr. Murphy, Grand Blanc, Michigan.



inviting undergraduate premedical clubs and advisors to visit its campus. Five such groups visited the college during the past year.

Our college presidents, deans, and faculty members are urged to step up their work with undergraduate colleges and at osteopathic district meetings to which high school educators are invited. Outstanding work has been done this year by these divisional societies and their guidance chairmen: Florida, Dr. George W. Frison, Sr.; Michigan, Dr. Donald J. Evans; Ohio, William S. Konold; Tennessee, Dr. Stanley C. Pettit; Indiana, Dr. Richard B. Wolfe; and Colorado, Dr. C. Robert Starks.

Under the leadership of Dr. Jacob G. Sheetz, the profession has been well represented at meetings of several premedical groups in undergraduate colleges in the New York City area. More individual college students are interviewed there than in any other district of the profession. The New England divisional societies have banded together under Dr. W. Hadley Hoyt, Jr., in arranging for a film presentation of osteopathic medicine as a part of the over-all recruitment of healing arts personnel. This program is presented by a former high school official.

It is a pleasure to report that in the last year an increased number of physicians appeared before high school and college groups throughout the country. Many showed the film, "Physician and Surgeon, D.O."

Auxiliary scholarships • Mrs. E. G. Nigh did an outstanding job as chairman of the Auxiliary's Scholarship Committee. Twelve scholarships of $1,500 each were awarded. Members throughout the country assisted greatly by checking on scholarship material in local colleges and universities.

Field work • During the year, your director has visited these schools, and attended these educational meetings:

Ohio—Bowling Green State University, University of Toledo, Heidelberg College, Ohio Northern University, Baldwin Wallace College, Western Reserve University, John Carroll University, Hiram College, Kent State University, Youngstown University, and Ohio State University.

Tennessee—Belmont College, David Lipscomb College, East Tennessee State College, Lee College, Madison College, Memphis State University, Southern Missionary College, Southwestern at Memphis, Tennessee Wesleyan College, University of Chattanooga, University of Tennessee, and Vanderbilt University.

Illinois—Wheaton College, Elmhurst College, Roosevelt University, Carthage College, Concordia Teachers College, Northwestern University, Illinois State Normal, Illinois Wesleyan, Knox College, Monmouth and Quincy Colleges, and Western Illinois University.

Michigan—Albion College, Emmanuel Missionary College, Hope College, Kalamazoo College, Michigan State University, and Western Michigan University.

Educational meetings—American Council on Education, American College Personnel Association, North Central Association of Colleges and Secondary Schools, Executive Committee of the Middle States Association, Deans' Association of the Southern Association of Colleges and Secondary Schools, and the inauguration of the president of George Washington University.

Vocational guidance talks—In Chattanooga, Nashville, Bristol, Knoxville, Memphis; Vocational Guidance Committee and Officers' Forum of Ohio; Rochester, Michigan (Macomb and Oakland county teachers); High School Counselors' Seminar, Northwestern University, Evanston, Illinois; premedical clubs at Wheaton College, Elmhurst College, Western Michigan State, and Kent State University.

Your director also appeared before Senate and House committees of the West Virginia legislature.

Osteopathic college visits—Your director acted as secretary of the survey teams at CCO, PCO, and COMS. He also visited COPS with members of the Committee on Colleges, and addressed the student bodies at KCCOS and KCOS.

Below, from left clockwise, Mrs. George F. Marjan and Dr. Marjan, Palos Heights, Illinois; Mrs. Otterbein Dressler and Dr. Dressler, Garden City, Michigan; Mrs. O. W. Shelksohn and Dr. Shelksohn, Ely, Nevada; Dr. C. Harry Vaughan, Burlington, Vermont; Mrs. C. E. Conklin and Dr. Conklin, Salt Lake City, Utah.

Robert A. Klobnak
Director

Division of Public and Professional Service

► During the past 6 months the Division of Public and Professional Service, like all other A.O.A. departments, has been thoroughly involved in the California problem. Staff support included editorials, background material for press kits, aid in the preparation of the President's letters, and other materials.

The director spent a total of 2 months in Los Angeles, serving as press representative and public relations counsel for the Osteopathic Physicians and Surgeons of California.

Our strategy to upset the merger machinery was to develop a good press for O.P.S.C. and expose all aspects of the merger to the general public, especially to M.D.'s, D.O.'s, and key publics.

Exposure of the conspiracy and constant harassment caused the merger forces considerable embarrassment, forced them to act impetuously, and kept them off balance. Both the M.D. and D.O. groups were well enough organized to win out in their houses of delegates despite the obstacles we placed in their path, but their positions were greatly weakened.

Press conferences were arranged for O.P.S.C. officers throughout the state, including such cities as San Diego, Los Angeles, Bakersfield, San Francisco-Oakland, and Sacramento. All conferences were successful.

The reaction of the public to the proposed merger was overwhelmingly negative. The responses we had following the appearance of news releases, special articles, and television and radio shows, indicate that in a referendum there will be considerable opposition to this issue.

A plan has been developed to capitalize on this public indignation. Citizen committees will be organized for the sole purpose of campaigning against medical monopoly in California. If a decision is made to fight for the law in California, we will begin immediately to implement this plan.

"American Doctor" • Turning to things more positive, the division is pleased to report that "American Doctor" is living up to expectations. As part of the public information program in California, the division authorized an accelerated program of television and group showings. Although the merger forces were successful in blocking some of the scheduled telecasts of the film in California, it has appeared on a number of TV stations and is doing very well in group showings.

The A.O.A. has 60 prints in circulation throughout the country, and has sold 38 to divisional societies, hospitals, and individuals. As of July 1, we have had a total of 40 telecasts throughout the nation. Considering that prints were not available until mid-March, we feel that this is excellent indication of the film's acceptance by television stations and the public.

Radio series • The 13-week radio series on leading health problems in the country has been approved by the U.S. Public Health Service. This series of 5-minute shows, entitled "Emphasis on Health," has been transcribed and is now ready for promotion and distribution to radio stations.

The May issue of the *Journal of the American Public Health Association* featured a lengthy article on

Guests at luncheon—Above, from left clockwise, Mrs. A. H. Fuller, Muskegon, Michigan; Mrs. B. M. Routzahn and Dr. Routzahn, Orlando, Florida; Mrs. Marion E. Coy, and Dr. Coy, Jackson, Tennessee; Dr. Robert E. Benson, Dearborn, Michigan; Dr. A. H. Fuller, Johnna Fuller, and Charles Fuller, Muskegon.

the Paducah Health Education Study. Its appearance in one of the leading journals in the health field further attests the validity and necessity of A.O.A. sponsorship of additional investigative efforts in this field. Unfortunately, the impact of having this article in the APHA *Journal* was somewhat diluted by the fact that the authors, Sheldon Steinberg and Eugene Fitzpatrick, minimized the role of the A.O.A.

State convention coverage • Members of the staff have, since last July, provided public relations coverage for fifteen conventions of divisional societies and specialty colleges. The division has also provided speeches, news releases, biographical material, and photographs to cover appearances of A.O.A and A.A.O.A. officials.

Exhibits • The division continued to display the A.O.A. exhibit, "Physicians for a Growing America," at major public health and educational meetings. Since last July the exhibit has been shown and been favorably received at the conventions of the Public Health Association, the American Personnel and Guidance Association, and the National Education Association. It is scheduled to be shown at the Chicagoland Health Fair in September.

The previous A.O.A. exhibit, under a loaning program to divisional societies, has been shown or is scheduled for showing in Minneapolis, Atlantic City, and St. Louis.

Consideration should be given to having the A.O.A. represented at the Century 21 exposition in Seattle, April 21 to October 21, 1962. This exposition will play host to an estimated 10 million visitors. The Washington Osteopathic Association is encouraging A.O.A. representation. An exhibit which the division feels would be effective has been studied. Participation for the 6-month period would probably cost between $25,000 and $30,000.

News Bulletin • The division continues to prepare the monthly *AOA News Bulletin,* which is distributed throughout the profession and to key publics. Also continuing is the division's assistance in producing the *Newsletter* of the National Osteopathic Guild Association.

A.O.A. journalism awards • The A.O.A. journalism awards competition is now well known among those in the journalism profession. Winners in the fourth annual competition were: Conwell Carlson of the Kansas City *Star,* a repeat winner, Harvey Hough of the Tonawanda (New York) *News,* and John W. Moran of the Bangor (Maine) *Daily News.*

Encyclopedias • During the year the division began a program of providing authoritative articles and definitions of osteopathy to encyclopedia and dictionary publishers. Articles were submitted upon request to the *American Oxford Encyclopedia,* the *Collier's Encyclopedia,* the *Grolier Encyclopedia,* and *The New International Year Book,* published by Funk & Wagnalls Company. An extended monograph on osteopathy as a career was prepared for The Institute for Research. In addition, initial steps were taken to offer a standard definition of osteopathy to all known dictionary publishers.

National magazines • News stories and feature articles on the California action have appeared in a number of medical publications including *Medical News, Medical World News, Medical Tribune, Medical Economics,* and the *Washington Report on the Medical Sciences.* In addition, *Time* and *Newsweek* have carried stories on the actions in the medical sections. Coverage, for the most part, has been fair and accurate, even though some publications are obviously not aware of the complexity of the issues being resolved.

Brochures • Pamphlets and brochures prepared during the year included "Focus on Research," a promotional pamphlet for the film, "American Doctor," and the brochure, "Ecuador Doctor," prepared for Dr. Donald Dilworth. The "Focus" brochure was the last in the series of informational pieces prepared for the National Osteopathic Foundation. It was mailed to a select list of foundations, pharmaceutical houses, and science writers.

As President of the American Osteopathic Association, Dr. Charles L. Naylor, is scheduled during the coming weeks to appear on the programs of these conventions:

Florida Osteopathic Medical Association, Miami Beach	Oct. 2-4
Missouri Association of Osteopathic Physicians and Surgeons, St. Louis	Oct. 3-5
American College of Osteopathic Internists, San Francisco	Oct. 5-7
New York State Osteopathic Society, New York City	Oct. 13-14
Pennsylvania Osteopathic Association—midyear refresher course, Hershey	Oct. 13-15
West Virginia Society of Osteopathic Medicine, White Sulphur Springs	Oct. 15-17
North Carolina Osteopathic Society, Asheville	Oct. 26-28
American College of Osteopathic Surgeons, Denver	Oct. 29-Nov. 2
Oklahoma Osteopathic Association, Tulsa	Nov. 7-9

General meetings • Staff participation in meetings outside the profession is increasing. Otha W. Linton attended several civil defense meetings and helped arrange seminars on disaster medical care in Kansas City and Cleveland for the A.O.A. Bureau on Disaster Medical Care. Leonard Heffel attended the Dartmouth College Conference and the White House Conference on Aging.

The director was a panelist on a National Health Council film clinic, and also served as a reporter during the National Health Council Forum in New York last March. The annual and midyear meetings of the American Medical Association were also covered.

Mr. Linton, who was with the division for more than 4 years, resigned June 1 to become director of public relations of the American College of Radiology. Robert Bradner also resigned, effective July 7, to assume the position of news editor of the *Savings and Loan News*. Mr. Bradner served as editor of the *AOA News Bulletin* for the past 2 years and was in charge of the A.O.A. exhibit program. The division will feel the loss of these men, both of whom were capable and dependable employees.

Dean Dranias, a graduate of the Northwestern University School of Journalism, has been added to the staff. He worked with the division 2 weeks during the 1959 A.O.A. Convention in Chicago, and came highly recommended by Mr. Fred Whiting, assistant dean of the School of Journalism.

An important step in the division's rebuilding program was taken last month when Leonard Heffel was made assistant director. Mr. Heffel, the division's special writer for the past year and a half, also serves as secretary of the A.O.A. Bureau of Research.

It is anticipated that the gradual reduction of activity relating to California will permit this division to devote greater effort to other creative and long-range programs which, of necessity, have suffered during the past year. The addition of men to return the staff to its required strength will further accelerate these programs.

John W. Mulford, D.O.
Chairman

Committee on Mead Johnson Grants

▶ For the last 6 years the American Osteopathic Association has received funds from Mead Johnson and Company, Evansville, Indiana, in support of a graduate education program for osteopathic physicians. In that time, thirty-six grants of $1,000 each have assisted thirty-three osteopathic graduates (three of whom received second-year grants) in postgraduate training in the fields of general practice, pediatrics, internal medicine, or obstetrics and gynecology.

Annual meeting • This year the Committee met on May 24 in Evansville, to award certificates to the nine young physicians who were completing their year of study under 1960 grants, and to choose fellowship recipients for the 1961 grants. Committee members were the guests of Mead Johnson Laboratories, the division that came into being during the year through changes in the company's corporate structure. This division now administers the grants program. Present, in addition to Dr. Mulford, were Dr. James H. McCormick, Dr. Paul van B. Allen, and Lawrence W. Mills.

Dr. Louis F. Rittelmeyer, Jr., the company's newly appointed vice president and medical director, was host to the meeting. Dr. Rittelmeyer succeeds Dr. W. D. Snively, Jr., who is now executive vice president of Mead Johnson and Company. Dr. Snively initiated the grants program in 1955.

Certificates awarded • The meeting awarded these certificates signifying completion of graduate work for 1960-61: In general practice: to Drs. Walter N. Goodman for work at the College of Osteopathic Physicians and Surgeons, and Robert E. Kappler, for work at the Chicago College of Osteopathy; in obstetrics and gynecology: to Dr. James E. Lyster, for work at COPS; in pediatrics: to Drs. Walter N. Pavlowich, at CCO; Gerald J. Hohn, at the College of Osteopathic Medicine and Surgery, and Leon A. Janis, COPS; in internal medicine: Drs. Augustin Acosta, COMS, Milan Lesko, Kirksville College of Osteopathy and Surgery, and Charles L. Schulman, CCO.

Award winners for 1961-62 • The meeting granted fellowships for the coming year to these nine physicians: In internal medicine: Drs. Ruth A. Duncombe, for work at CCO, Milton J. Setnar, at Doctors Hospital, Columbus, Ohio, and C. Eugene Soechtig, at Detroit Osteopathic Hospital; in obstetrics and gynecology: Drs. Richard L. Jensen, at CCO, and Willard K. Hall, at Doctors Hospital; in pediatrics: Drs. Wilson P. Bailey, at KCOS, and Richard H. Mercer and Donald R. Mengel, both at the Philadelphia College of Osteopathy.

Program grows • The growing number of applicants for grants attests increasing interest in the Mead Johnson program. The Committee is appreciative of the cooperation of osteopathic college deans and faculty members in bringing the program to the atten-

Reprints of "Focus on Osteopathic Education" are again available from A.O.A. Order Department 212 East Ohio Street Chicago

Review O.P.F. standings for 1961—Osteopathic Progress Fund Director Robert Bennett, Chicago, and Dr. Earl K. Lyons, Chandler, Arizona, chairman of the O.P.F. Committee, study chart of state returns in support of osteopathic education.

tion of their students. Nine fellowships will be awarded in 1962, three in general practice, and two each in pediatrics, internal medicine, and obstetrics and gynecology.

Of Mead Johnson and Company, the Committee expresses appreciation to Dr. Snively, Dr. Rittelmeyer, and Mrs. L. J. Sandefur, executive secretary of the company's graduate training program. Of the American Osteopathic Association, it is grateful for the counsel and guidance of Executive Director True B. Eveleth, Business Manager Walter A. Suberg, Treasurer Kenneth L. Ettenson, committee consultant Dr. George W. Northup, chairman of the Committee on Colleges; and for the editorial assistance of Katherine Becker, Betty M. Kanameishi, and Ann Conlisk.

Attention, counselors!
Order "Opportunities in Osteopathy" by
Lawrence W. Mills from
Guidance Manuals, Inc.
212 48th Street
Bayside, New York
Price $1.00

Earl K. Lyons, D.O.
Chairman

Report of the Osteopathic Progress Fund Committee

► The Osteopathic Progress Fund Committee is pleased to report that the total giving from the profession for the fiscal year 1960-61 in support of osteopathic education was $903,081.91. This amount represents over 90 per cent of our yearly goal, and is 21 per cent higher than has been received in any previous year.

Concern for our educational programs is evidenced in increased O.P.F. participation, by our doctors both individually and as members of state organizations.

Major meetings of the Committee were held in October in Central Office and in January in Miami Beach, Florida. Members have participated in the visitation program that is always an important part of Committee service. Dr. Merlyn McLaughlin visited New Jersey; Dr. Henry Hillard attended both meetings of the Pennsylvania association; Dr. Richard Payne, the conventions of North Carolina, Tennessee, and his own state of Georgia. Robert Bennett, O.P.F. Director, went to the annual conventions in New York, New Jersey, North Carolina, Illinois, Indiana-Kentucky, Tennessee, and the two meetings in Pennsylvania. Your Chairman visited doctors in Massachusetts and Arizona, and attended the Arizona-New Mexico convention.

A great deal of work has been done to encourage the states of New York, New Jersey, Pennsylvania, and Massachusetts to adopt the support-through-dues program, with encouraging results. We believe that the states of Kentucky, North Carolina, and Georgia will soon join the program.

The *O.P.F. Newsletter* has been produced each month, and your Chairman has written a series of articles for D.O. A portable exhibit, new this year, has proved effective at various meetings. Early in the year a chart was produced to show that gains or losses in membership in state societies cannot be directly traced to the support-through-dues program. Mail campaigns have been carried on with indifferent results in states where members of the Committee could not visit with doctors individually.

Two projects face the Commit-

tee: campaigns for support from osteopathic hospitals, and the setting of more realistic goals for professional giving.

For their counsel, encouragement, and active support the Chairman wishes to thank A.O.A. President Roy J. Harvey, and the A.A.O.A. president and president-elect, Mrs. Campbell A. Ward and Mrs. William B. Strong. He appreciates the continued excellence of the work of Miss Helen Frazier, O.P.F. secretary, and is grateful to others of the Central Office staff who have assisted the Committee.

As O.P.F. director, Robert Bennett has given exceptional service to the profession. I commend him personally for his fine work.

Robert Bennett
Director

Report of Director of Osteopathic Progress Fund

▶ The Osteopathic Progress Fund has just completed what has been financially the most successful year in its history. Members of the profession have contributed $174,348.36 more for college support than in any previous year. Twenty-six divisional societies increased their giving from a few dollars, in some cases, up to as much as $44,000 in others. Eighteen divisional societies exceeded their goals. In six divisional societies 100 per cent of the membership participated.

Proud as we are of this, we must face up to other situations. This year 4 states have given nothing; 8 have given from 2 to 9 per cent of their goals; 20 have given 15 per cent to 87 per cent of their goals; three eastern states with large osteopathic populations have given from 7 to 15 per cent. Nineteen divisional societies contributed less than a year ago.

All of this charts the road ahead. Certain areas must have a rebirth of enthusiasm. Dedicated leaders must educate and inform fellow practitioners of the satisfaction of being a help to the profession.

Visits by director • In the last 6 months, your director has visited eight divisional society conventions, in most instances with a member of the Committee. Special credit is due Dr. Wendell F. Bizzozero, O.P.F. chairman of New York, who so ably represented the National Committee at the Massachusetts convention in Boston last January. At these conventions, our first purpose is to assist the state chairman, officers, and other dedicated D.O.'s in obtaining their maximum support. Experience proves that a support-through-dues by-law will provide this maximum. This method, therefore, is emphasized.

The O.P.F. staff in Central Office has worked with the chairman in getting out a mail campaign in several states. It is designed to make the D.O. who could not be contacted personally aware of the needs of his colleges and of his responsibility to help meet them. In our opinion, these letters were excellent. The results, however, were indifferent. While the intangible results of the letter campaign cannot be calculated, certainly experience has proved once again that personal solicitation is the best way to gain capital funds.

We are happy to report that the operation of the O.P.F. office has proceeded in an orderly manner. Every detail has been attended to, and there is no backlog of work.

Plans for future • Plans for the future call for an organizational setup that will provide a slate of D.O.'s able to help in meeting local situations that are difficult. More personal visitations will be made by national committee members, college personnel, and the director, to assist those at the district and divisional society levels. All other aids, such as educational pamphlets, articles in the profession's publications, exhibits, and direct mail appeals will be used.

American Osteopathic Association Officers and Trustees—1961-62

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2. Committee on Ethics—Wesley B. Larsen (1964), Chairman (1961-62); J. Edward Sommers (1964), John W. Hayes (1962), Isadore Siegel (1963), W. S. Horn (1965)

3. Committee on Membership—John W. Hayes, Chairman; J. Myron Auld, James H. McCormick

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B. Bureau of Insurance—John W. Mulford (1963), Chairman (1961-62); William F. Neugebauer (1964), George W. Northup (1962), Raymond A. Gadowski (1965)

IV. COUNCIL ON FEDERAL HEALTH PROGRAMS
Carl E. Morrison (1963), Chairman (1961-62); E. A. Ward (1964), Galen S. Young (1962), Eugene D. Mosier (1962), Roy J. Harvey (1963)

V. COUNCIL ON DEVELOPMENT
William B. Strong (1962), Chairman (1961-62); Mrs. George Cozma (1962), J. Scott Heatherington (1963), Mr. William S. Konold (1963), R. N. MacBain (1964). Consultants: Earl K. Lyons (O.P.F.); Philip E. Haviland (Speaker of House)

VI. PAST PRESIDENTS COUNCIL
Robert D. McCullough, Chairman (1961-62); Carl E. Morrison (1963), George W. Northup (1964)

VII. AD HOC COMMITTEES

A. Conference Committee—Otterbein Dressler, Chairman; Carl E. Morrison, Marion E. Coy, Robert D. McCullough, Galen S. Young, Charles L. Naylor. Consultants: True B. Eveleth, Roy J. Harvey, Charles W. Sauter, II, George W. Northup, Mr. Milton McKay

B. Osteopathic Progress Fund Committee—Earl K. Lyons, Chairman; Richard A. Payne, Vice-Chairman; Merlyn McLaughlin, Ph.D. (Association of Colleges), Mrs. Joseph W. Kenney (Auxiliary), Henry N. Hillard (House of Delegates)

C. Committee on Mead Johnson Grants—John W. Mulford (1962), Chairman (1961-62); Ira C. Rumney (1965), R. A. Kistner (1964), Bernard J. Plone (1963). Mr. Lawrence W. Mills, Consultant

D. Committee on A.O.A. Organizational Structure and Coordination—Campbell A. Ward, Chairman; Richard E. Eby, Wallace M. Pearson, William L. Silverman, Loren R. Rohr

E. Committee on Century 21 Exposition—John W. Hayes, Chairman; Wesley B. Larsen, Wallace M. Pearson, J. Edward Sommers

Advisor to Auxiliary to A.O.A.—Galen S. Young

Representatives to National Health Council—True B. Eveleth, Agency Executive. Delegates: Alexander Levitt, Robert D. McCullough, Charles W. Sauter II. Joseph H. Huff, Member, National Advisory Committee on Local Health Departments; J. Marshall Hoag, Member, Committee on Health Education; Leonard V. Strong, Member, Committee on Research; Charles W. Sauter, II, Member, State and Local Health Councils

(President is ex-officio member of all committees)

Officials of State and Provincial Licensing Boards *(and Osteopathic Members of Composite Boards)*

	Name and Address
*Alabama	§D. G. Gill, M.D., State Office Bldg., Montgomery 4
*Alaska	§D. M. Whitehead, M.D., Box 140, Juneau
‡Arizona	§Russell Peterson, D.O., 2747 E. McDowell Rd., Phoenix 22
‡Arkansas	§E. M. Sparling, D.O., 222 Thompson Bldg., Hot Springs Natl. Pk.
‡California	§Glen D. Caylor, D.O., 1013 Forum Bldg., Sacramento 14 (board address)
†Colorado	§Mary M. McConnell, 715 Republic Bldg., Denver 2 (Executive Secretary)
	••C. C. Thorpe, D.O., 500 Ninth Ave., Longmont
	••C. Robert Starks, D.O., 1459 Ogden St., Denver 18
‡Connecticut	§Frank Poglitsch, D.O., 300 Main St., New Britain
	Medical Examining Board in Surgery:
	§Creighton Barker, M.D., 160 St. Ronan St., New Haven
*Delaware	§Joseph S. McDaniel, M.D., Professional Bldg., Dover
†District of Columbia	*Address communications to:* Paul Foley, Deputy Director, Dept. of Occupations and Professions, 1740 Massachusetts Ave., N.W., Washington 6
	••Chester D. Swope, D.O., 1712 Eye St., N.W., Washington 6
‡Florida	§Thomas F. Sheffer, D.O., Las Olas Hospital, 1516 E. Las Olas Blvd., Ft. Lauderdale
‡Georgia	*Address communications to:* C. L. Clifton, Joint Secretary, State Examining Boards, 224 State Capitol, Atlanta
‡Hawaii	§Richard Y. Kodama, D.O., 826 Keeaumoku St., Honolulu 14
‡Idaho	§Susan B. Kerr, D.O., McCall
	Address communications to: Nan K. Wood, Director, Occupational License Bureau, Dept. of Law Enforcement, State House, Boise
†Illinois	*Address communications to:* Frederic B. Selcke, Superintendent of Registration, Illinois Dept. of Registration and Education, Capitol Bldg., Springfield
†Indiana	••Ransom L. Dinges, D.O., Orangeville
	§Ruth V. Kirk, 538 K. of P. Bldg., Indianapolis 4 (Executive Secretary)
‡Iowa	••H. Dearing Wolf, D.O., 809-13 Odd Fellows Bldg., Indianapolis 4
	§George W. Sutton, D.O., 511 E. Washington, Mt. Pleasant
	Address communications to: Herman W. Walter, Asst. Secretary, 519-20 Insurance Exchange Bldg., Des Moines (central office)
†Kansas	§Francis J. Nash, M.D., New Brotherhood Bldg., Kansas City
	••Stanley E. Davis, D.O., 600 W. Maple St., Columbus
	••Richard Gibson, D.O., Osteopathic Clinic, 1404 Main St., Winfield
	••James B. Donley, D.O., Donley Osteopathic Hospital, 437 N. Cedar St., Kingman
†Kentucky	§Russell E. Teague, M.D., 275 E. Main St., Frankfort
	••Edmund H. Bouton, D.O., 210 W. Main St., Frankfort
‡Louisiana	§Carl E. Warden, D.O., 827 Hodges St., Lake Charles
‡Maine	§George F. Noel, D.O., 20 Monument Sq., Dover-Foxcroft
‡Maryland	§Christopher L. Ginn, D.O., 19 W. Mulberry St., Baltimore 1
†Massachusetts	§David W. Wallwork, M.D., Room 37, State House, Boston 33
	••Robert R. Brown, D.O., 64 Trapelo Rd., Belmont 78
‡Michigan	§Roy G. Bubeck, Jr., D.O., 2851 Clyde Park Ave., S.W., Grand Rapids 9
‡Minnesota	§Clifford F. Dartt, D.O., 318 Bush St., Red Wing
*Miss.ssippi	§Archie Lee Gray, M.D., Box 1700, Jackson
†Missouri	§John A. Hailey, P.O. Box No. 4, Jefferson City
	••Richard A. Michael, D.O., 218 Jackson St., Jefferson City
	••R. W. Matheny, D.O., 812 Clay St., Chillicothe
‡Montana	§Warren E. Monger, D.O., Box 64, Dillon
‡Nebraska	§Donald O. Brown, D.O., 1218 "N" St., Auburn
	Address communications to: R. K. Kirkman, Director, Bureau of Examining Boards, State Dept. of Health, Lincoln 9
‡Nevada	§John H. Pasek, D.O., 205-10 First Natl. Bank Bldg., Minden
*New Hampshire	§Edward W. Colby, M.D., State House, Concord
†New Jersey	§Vincent Butler, M.D., Room 1407, 28 W. State St., Trenton 8
	••Edwin T. Ferren, D.O., 2707 Westfield Ave., Camden 5
‡New Mexico	§L. D. Barbour D.O., Roswell Osteopathic Hospital, Roswell
†New York	§Stiles D. Ezell, M.D., Bureau of Professional Examinations and Registrations, 23 S. Pearl St., Albany 7
	••John R. Pike, D.O., 90 State St., Albany 7
‡North Carolina	§Joseph H. Huff, D.O., 330 W. Front St., Box 1177, Burlington
‡North Dakota	§Georgianna Pfeiffer, D.O., 8 S. Terrace, Fargo
†Ohio	§H. M. Platter, M.D., 21 W. Broad St., Columbus 15
	••James O. Watson, D.O., 111 W. Third Ave., Columbus 1
‡Oklahoma	§G. R. Thomas, D.O., 2923 N. Walker, Oklahoma City 3
†Oregon	§Howard I. Bobbitt, 609 Failing Bldg., Portland 4 (Executive Secretary)
	••David E. Reid, D.O., P.O. Box 277, Lebanon
‡‡‡Pennsylvania	§Katherine M. Wollet, Bureau of Professional Licensing, Harrisburg
*Puerto Rico	§Joaquin Mercado Cruz, c/o Dept. of State, Box 3271, San Juan
†Rhode Island	••§J. Francis Crowley, D.O., 654 Main St., Pawtucket
	••Frederick S. Lenz, D.O., 1141 Narragansett Blvd., Cranston 5
	Address communications to: Thomas B. Casey, Administrator of Professional Regulation, 366 State Office Bldg., Providence
‡South Carolina	§Ernest A. Johnson, D.O., Box 525, Summerville
†South Dakota	§John C. Foster, Room 300, First National Bank Bldg., Sioux Falls (Executive Secretary)
	••Lawrence L. Massa, D.O., 981 E. Main St., Sturgis
‡Tennessee	§M. E. Coy, D.O., 1226 Highland Ave., Jackson
†Texas	§M. H. Crabb, M.D., 1714 Medical Arts Bldg., Ft. Worth 2
	••Howard R. Coats, D.O., Coats-Brown Clinic and Hospital, 615 S. Broadway, Tyler
	••R. H. Peterson, D.O., 324 Hamilton Bldg., Wichita Falls
	••G. G. Porter, D.O., Porter Clinic Hospital, 2401 19th St., Lubbock
‡Utah	§Clarence E. Hyatt, D. O., 144 E. Fifth North St., Provo
	Address communications to: Frank E. Lees, Director, Registration Division, Dept. of Business Regulation, State Capitol, Salt Lake City 14
‡Vermont	§Charles D. Beale, D.O., Mead Bldg., Rutland
†Virginia	§Russell Cox, M.D., 505 Washington St., Portsmouth
	••Felix D. Swope, D.O., 216 Virginia Ave., Alexandria
‡‡Washington	*Address communications to:* Thomas A. Carter, Secretary, Professional Division, Dept. of Licenses, Olympia
	•••Stephen M. Pugh, D.O., 3010 Hoyt Ave., Everett
	•••Ernest E. Williamson, D.O., 423 Third Ave., Moses Lake
	•••C. Wallace Roehr, D.O., 13014 12th Ave., S.W., Seattle 66
‡West Virginia	§Donald C. Newell, D.O., 137½ Main St., Oak Hill
†Wisconsin	§Thomas W. Tormey, Jr., M.D., Room 28, 115 S. Pinckney St., Madison 2
	••H. G. Withrow, D.O., Hustisford Hospital and Clinic, Hustisford
†Wyoming	§James W. Sampson, M.D., State Office Bldg., Cheyenne
	••M. O. Fuerst, D.O., 205 S. Fourth St., Riverton
Canada	
†Alberta	§G. B. Taylor, Acting Registrar, Office of the Registrar, University of Alberta, Edmonton
	••E. A. Hay-Roe, D.O., 11156 64th St., Edmonton
*British Columbia	Registrar: Lynn Gunn, M.D., 1807 W. 10th Ave., Vancouver 9
‡Manitoba	§W. Kurth, D.O., 248 Moorgate Blvd., St. James, Winnipeg 12
†††Ontario	§D. G. A. Campbell, D.O., 2 Bloor St., E., Toronto 5
†Saskatchewan	••Doris M. Tanner, D.O., 2228 Albert St., Regina
	••Anna E. Northup-Little, D.O., 2228 Albert St., Regina

*M.D. board
••Osteopathic member
•••Member, Osteopathic examining committee
†Composite board
††Osteopathic examiner
†††Board of Directors of Osteopathy under Drugless Practitioners Act
‡Osteopathic board
‡‡Osteopathic examining committee
‡‡‡Five D.O.'s, two M.D.'s, and Superintendent of Public Instruction
§Secretary

Divisional Societies' Presidents and Secretaries

As of September 1, 1961

Divisional Society	*Latest Election*	*President*	*Secretary*
Alabama	No meeting	Meredith White, 735 First National Bank Bldg., Mobile 13	John V. Glass, 2100 Eighth Ct., S., Birmingham 5
Arizona	May	Harmon L. Myers, 3223 N. 1st Ave., Tucson	L. A. Nowlin, 1325 W. McDowell Rd., Phoenix Executive Director: Mr. Stanley N. Schultz, Pima Plaza Bldg., Suite 213, 2030 E. Broadway, Tucson
Arkansas	May	Roger H. Mount, 216 E. Central St., Siloam Springs	Acting Secretary: Roger H. Mount, 216 E. Central St., Siloam Springs
California	December	Richard E. Eby, 302 W. Orange Grove Ave., Pomona	David Dobreer, 5307 E. Beverly Blvd., Los Angeles 22 Executive Secretary: Mr. David J. Rodgers, 2999 W. Sixth St., Los Angeles 5
Colorado	April	C. R. Patterson, 809 2nd Ave., Ault	C. R. Starks, 1459 Ogden St., Denver 18
Connecticut	June	C. Tyler Holbrook, 596 Thompson Ave., East Haven	Charles W. Cornbrooks, Jr., 37 Corbin Dr., Darien
Delaware	June	Henry George, III, 2212 Baynard Blvd., Wilmington 2	James J. Giliberto, 2306 N. Van Buren St., Wilmington 2 Executive Secretary: Mr. James F. Moran, Riverside Hospital, Clifton Park Manor, Wilmington 2
Dist. of Columbia	May	Albert F. Dilworth, 1835 "K" St., N.W., Washington 6	Laurence R. Bower, 1246 Monroe St., N.E., Washington 17
Florida	September	George W. Frison, Sr., 209 Whitehair Bldg., De Land	Executive Director: Vacancy—Address communications to the Association at 5009 Central Ave., Tampa 3
Georgia	May	Raymond S. Houghton, 314 Dawson St., Thomasville	Alfred R. Haight, 2170 Idlewood Rd., Tucker Executive Secretary: Mr. S. H. Andrews, 2160 Idlewood Rd., Tucker
Hawaii	October	Kenneth E. Little, 313 Kaukeolani Bldg., Honolulu 13	Joseph W. Stella, 122 Oneawa St., Kailua, Oahu
Idaho	June	John C. Rushton, 320 Second Ave., N., Twin Falls	Emery J. Miller, 412 15th Ave., S., Box 150, Nampa
Illinois	April	Merwyn G. Miller, 302 Smith Bldg., Freeport	Executive Director: Mr. D. O. Durkin, Room 521, 53 W. Jackson Blvd., Chicago 4
Indiana	May	Randall Bass, 1000 Kahn Bldg., Indianapolis 4	Arabelle Baker Wolf, 4840 N. Michigan Rd., Indianapolis 8 (Association address)
Iowa	May	John W. Campbell, 320 E. 29th St., Davenport	Mr. Herman W. Walter, 519-20 Insurance Exchange Bldg., Des Moines 9
Kansas	September	Glen D. Jewett, Cornwell Bldg., St. John	Executive Secretary: Mr. Lloyd L. Hall, 823 W. 10th St., Topeka
Kentucky	May	F. V. Chambers, 2003 Triplett St., Owensboro	Martha Garnett, 2829 Brownsboro Rd., Louisville 6
Louisiana	October	Melbert R. Higgins, Box 286, S.L.I., Lafayette	V. L. Wharton, 406-07 Weber Bldg., Lake Charles
Maine	June	Robert J. Meehan, 7 Oliver St., Rockland	Executive Director: Mr. George R. Petty, Monmouth
Maryland	October	Ernest R. MacDonald, 10 W. Hamilton St., Baltimore 1	Joseph W. Lindstrom, 2732 St. Paul St., Baltimore 18
Massachusetts	January	William A. Seeglitz, 315 Franklin St., Newton 58	Robert R. Brown, 64 Trapelo Rd., Belmont 78 Executive Secretary: Mrs. Gladys M. Stockdale, 524 California St., Newtonville 60
Michigan	October	Donald L. Cummings, 1371 Plainfield Ave., N.E., Grand Rapids 5	E. George Textor, 1128½ N. Chevrolet Ave., Flint 4 Executive Secretary: Mr. Floyde E. Brooker, 33100 Freedom Rd., Farmington
Minnesota	May	Oscar R. Purtzer, 708 First, N., New Ulm	E. R. Komarek, 301 Granite Exchange Bldg., St. Cloud
Missouri	October	Gilbert H. Kroeger, Reid Hospital and Clinic, 17th and Central Ave., Bethany	Executive Secretary: Mr. Paul D. Adams, 325 E. McCarty St., Jefferson City
Montana	August	C. G. Sundelius, 7-9 K. M. Bldg., Kalispell	Donald H. Schmidt, 506 26th St., N., Great Falls
Nebraska	September	A. G. Zuspan, Fidelity Bldg., Aurora	Executive Secretary: Mr. Robert H. Downing, Security Natl. Bank Bldg., Superior
Nevada	May	O. W. Shelksohn, Hotel Nevada Bldg., Box 390, Ely	Joseph P. Valeska, 139 N. Virginia St., Reno
New Hampshire	June	William L. Johnston, 913 Elm St., Manchester	Charles H. Bowles, 2 Russell St., Plymouth
New Jersey	March	Alex E. Maron, 1003 Grand Ave., Asbury Park	John C. Pellosie, 133 Union Ave., Paterson Executive Secretary: Mr. R. P. Chapman, 1212 Stuyvesant Ave., Trenton 8
New Mexico	April	Lory Baker, 400 N. Church St., Las Cruces	Joseph M. Peterson, 124 Tenth St., N.W., Albuquerque Executive Secretary: Mr. L. Thomas Christison, P.O. Box 696, Albuquerque
New York	October	William E. Kaufman, 1712 S. Salina St., Syracuse 5	Executive Secretary: C. Fred Peckham, 38 E. Bridge St., Oswego
North Carolina	October	Guy T. Funk, 900 S. Hawthorne Rd., Winston-Salem	Walter C. Eldrett, 310 S. Main St., Hendersonville
North Dakota	April	Erwin O. Smith, 605 Dakota Ave., Wahpeton	Georgianna Pfeiffer, 8 S. Terrace, Fargo
Ohio	May	Donald J. Ulrich, 420 W. Main St., Kent	Executive Secretary: Mr. William S. Konold, 53 W. Third Ave., Columbus 1
Oklahoma	November	Ernest T. Ross, 420 Commerce Bldg., Okmulgee	G. R. Thomas, 2923 N. Walker, Oklahoma City 3 Executive Secretary: Mr. Walter L. Gray, 820 Braniff Bldg., Oklahoma City
Oregon	June	Milton R. Snow, 214 Medical Center Bldg., Medford	David E. Reid, Box 277, Lebanon
Pennsylvania	May	David Shuman, 1728 Pine St., Philadelphia 3	Aaron A. Feinstein, Metropolitan Hospital, 300 Spruce St., Philadelphia 6 Executive Director: Mr. Thomas Fogarty, 1941 Market St., Harrisburg

Divisional Society	*Latest Election*	*President*	*Secretary*
Rhode Island	February	Leroy F. Garland, 442 Washington St., West Warwick	J. Jerry Rodos, 981 Narragansett Blvd., Providence 5
South Carolina	September	Ernest A. Johnson, Box 525, Summerville	Nancy A. Hoselton, 1711 Gervais St., Columbia
South Dakota	May	Herman E. Gegner, 509 S. Minnesota Ave., Sioux Falls	Earl M. Hewlett, 417 W. 27th St., Sioux Falls
Tennessee	May	Richard E. Owen, Sharon	Paul Grayson Smith, Pikesville
Texas	May	G. W. Tompson, 10334 Palestine St., Box 24218, Houston 29	Executive Secretary: Phil R. Russell, 512 Bailey St., Ft. Worth 7
Utah	June	Clifford E. Conklin, 213 Ninth Ave., Salt Lake City 3	Clarence E. Hyatt, 144 E. 500 North St., Provo
Vermont	September	C. Harry Vaughan, 260 Main St., Burlington	Marian Norton Rice, 8 Court St., Windsor
Virginia	May	John A. Cifala, 2778 N. Washington Blvd., Arlington 1	Henry S. Liebert, Jr., 3514 Grove Ave., Richmond 21
Washington	June	Charles M. Mitchell, 624 N. Adams, Pasco	Lon A. Hoover, 1219 Sixth Ave., Tacoma 5
West Virginia	May	Hoy E. Eakle, Summerville	Executive Secretary: Mr. Gilbert D. Brooks, 313 Berman Bldg., Charleston 1
Wisconsin	May	James W. Stout, Stout Clinic, 322 Vine St., Hudson	V. L. Sharp, 3924 S. 51st St., Milwaukee 19 Executive Secretary: Mr. Wayne A. Reif, 132 W. Mount Royal Rd., Milwaukee 17
Wyoming	June	Clinton E. Van Vleck, Jackson	G. A. Roulston, 2823 Central Ave., Cheyenne
Australia	July	D. Cameron McGown, 67 Castlereagh St., Sydney N.S.W.	Joan Philcox, 1, Delhi St., Bentleigh, Melbourne, S.E. 14, Victoria
British	November	M. John Rolles, Lincoln House, West Rd., Guildford, Surrey	Thurston True, Andrew Still House, 24-25 Dorset Sq., London N.W. 1, (Central office address)
British Columbia	November	Robert Stark, 212-15 Stobart Bldg., Victoria	Vernon B. Taylor, 806-10 Bank of Toronto Bldg., 1405 Douglas Ave., Victoria
Manitoba	January	W. Kurth, 248 Moorgate Blvd., St. James, Winnipeg 12	G. Glenn Murphy, 120 Sherburn St., Winnipeg 10
Ontario	May	D. G. A. Campbell, 2 Bloor St., E., Toronto 5	William Kimball Church, 85 Neywash St., Orillia
Quebec	January	A. E. Wilkinson, 616 Medical Arts Bldg., Montreal 25, Quebec	Bruce E. Marshall, 1468 Bishop St., Montreal 25, Quebec
Saskatchewan	December	Anna E. Northup-Little, 2228 Albert St., Regina	Doris M. Tanner, 2228 Albert St., Regina

Osteopathic Hospitals

The following hospitals meet the minimum standards set by the American Osteopathic Association for: 1) registered or nonteaching hospitals; 2) hospitals approved for the training of interns; and 3) hospitals approved for the training of interns and residents. This approval extends from July 1, 1961, to June 30, 1962.

True B. Eveleth, D.O., Executive Director, A.O.A.

Teaching hospitals are printed in *italics*	Teaching hospitals approved for: Internships	Residencies
Allentown Osteopathic Hospital, 1736 Hamilton St., Allentown, Pa.	x	RAD-1; S-1*
Amarillo Osteopathic Hospital, 801 W. Tenth Ave., Amarillo, Texas		
Ardmore Osteopathic Hospital, 910 Moore, S.W., Ardmore, Okla.		
Art Centre Hospital, 5435 Woodward Ave., Detroit 2, Mich.	x	ANES-3; I-2; OBG-2; PATH-2; RAD-2; S-2
Avon Center Hospital, 55 E. Avon Rd., Rochester, Mich.		
Axtell Osteopathic Hospital, 205 S. Broadway, Princeton, Mo.		
Barnes Osteopathic Hospital and Clinic, W. Vermont St., King City, Mo.		
Bashline Osteopathic Hospital and Clinic, Pine and Center Sts., Grove City, Pa.	x	S-2
Bay Osteopathic Hospital, 300 Mulholland St., Bay City, Mich.	x	
Bay View Hospital, 23200 W. Lake Rd., Bay Village, Ohio	x	ANES-1; OBGS-1; PATH-1; RAD-1; S-1
Bellevue Hospital and Clinic, 1115 W. Alabama, Houston 6, Texas		
Big Sandy Clinic-Hospital, Gilmer St., Big Sandy, Texas		
Biscayne Osteopathic Hospital, 6337 Biscayne Blvd., Miami 38, Fla.	x	ANES-1
Blackwood-Mims Clinic and Hospital, 201 E. Grand Ave., Comanche, Texas		
Brentwood Hospital, 4110 Warrensville Center Rd., Cleveland, Ohio	x	I-2; OR-1; S-2
Cape Osteopathic Hospital, 105 S. Spanish St., Cape Girardeau, Mo.		
Cardwell Memorial Hospital, Stella, Mo.		
Carson City Hospital, Elm at Third, Carson City, Mich.	x	S-1
Cassville Osteopathic Hospital, 87 Gravel St., Cassville, Mo.		

*For specialty symbols see page 67. Numerals indicate number of residencies offered.

Teaching hospitals are printed in *italics*	Teaching hospitals approved for: Internships	Residencies
Charles E. Still Osteopathic Hospital, 1201 S. Madison St., Jefferson City, Mo.	x	ANES-1; S-1
Cherry Hill Hospital, Chapel Ave. and Cooperslanding Rd., Delaware Township, N. J.	x	I-2; OALR-1; OBG-2; PD-1; RAD-1; S-2
Chesemore Clinic and Hospital, 715 Morton St., Paris, Tenn.		
Chicago Osteopathic Hospital, 5200 S. Ellis Ave., Chicago 15, Ill.	x	ANES-1; I-2; OBG-2; PATH-2; PD-1; RTD-2; S-1
Clare General Hospital, 104 W. Sixth St., Clare, Mich.	x	
Coats-Brown Clinic and Hospital, 615 S. Broadway, Tyler, Texas		
College Hospital, 725 Sixth Ave., Des Moines 9, Iowa	x	I-2; OBG-1; PD-1; RTD-1; S-1
Community Hospital, 1405 Holland Ave., Houston 29, Texas	x	
Community Memorial Hospital, 319 Grand Ave., Moberly, Mo.		
Community Memorial Hospital, 2100 Davenport, Sturgis, S. Dak		
Corpus Christi Osteopathic Hospital, 1202 Third St., Corpus Christi, Texas	x	
Crater Osteopathic Hospital, 600 S. Second St., Central Point, Ore.		
Crews Hospital and Clinic, 307 St. Francis St., Gonzales, Texas		
Currey Clinic-Hospital, 901 N. Jefferson, Mt. Pleasant, Texas		
Dallas Osteopathic Hospital, 5003 Ross Ave., Dallas 6, Texas	x	ANES-1; PATH-1; S-2
Davenport Osteopathic Hospital, 1111 W. Kimberly, Davenport, Iowa	x	I-1
Delaware Valley Hospital, Wilson Ave. and Pond St., Bristol, Pa.	x	I-1; S-1
Delgado Green Cross Hospital, Box D, Ysleta Station, El Paso, Texas		
Denison Hospital and Clinic, 417 W. Woodard St., Denison, Texas		
Des Moines General Hospital, 603 E. 12th St., Des Moines 16, Iowa	x	ANES-2; I-1; OBG-1; RAD-1; S-2
Detroit Osteopathic Hospital, 12523 Third Ave., Detroit, Mich.	x	ANES-6; I-8; OALR-2; OBG-5; OR-3; PATH-4; RAD-4; S-8
Doctors Hospital, 1087 Dennison Ave., Columbus 1, Ohio	x	ANES-2; I-3; OALR-2; OBG-1; OR-2; RAD-3; S-4
Doctors Hospital, 5500 30th St., Groves, Texas		
Doctors Hospital, 5815 Airline Drive, Houston 9, Texas		
Doctors Hospital, 2821 Riverside Ave., Jacksonville 5, Fla.		
Doctors Hospital, 2501 Gillham Rd., Kansas City 8, Mo.		
Doctors Hospital, 401 15th St., N., St. Petersburg, Fla.		
Doctors Hospital, 300 W. Call St., Starke, Fla.		
Doctors Hospital, 2160 Idlewood Rd., Tucker, Ga.		
Doctors Memorial Osteopathic Hospital, 700 E. Sunshine, Springfield, Mo.		
Doctors Osteopathic Hospital, 239 W. 10th St., Erie, Pa.	x	RT-1
Donley Osteopathic Hospital and Clinic, 437 N. Cedar St., Kingman, Kansas		
East Liverpool Osteopathic Hospital, 332 W. 6th St., East Liverpool, Ohio		
East Town Osteopathic Hospital, 7525 Scyene Rd., Dallas 27, Texas	x	S-1
Edgewater Hospital, 1705 N. Prospect Ave., Milwaukee 2, Wis.		
Elliston Clinic and Hospital, 707 S. Main St., Covington, Tenn.		
Elm Street Hospital and Clinic, 212 S. Elm St., Denton, Texas		
Erie Osteopathic Hospital, 234 W. Sixth St., Erie, Pa.	x	
Flint General Hospital, 765 E. Hamilton Ave., Flint 5, Mich.	x	ANES-1; RAD-1; S-1
Flint Osteopathic Hospital, 3921 Beecher Rd., Flint 4, Mich.	x	ANES-4; I-2; OALR-1; OBG-2; PATH-3; PD-1; RAD-3; S-3
Forest Hill Hospital, 924 E. 152nd St., Cleveland 10, Ohio	x	
Fort Worth Osteopathic Hospital, 1000 Montgomery St., Fort Worth 7, Texas	x	S-1
Garden-City Ridgewood Hospitals	x	ANES-2; OBG-2; PATH-1; RAD-3; S-2
Garden City Hospital, 6245 N. Inkster Rd., Garden City, Mich.		
Ridgewood Hospital, 10000 Geddes Rd., Ypsilanti, Mich.		
Gleason Hospital, 523 Main St., Larned, Kans.	x	
Gordon Memorial Hospital, 1816 West St., Sioux City, Iowa		
Granbury General Hospital, 116 S. Houston St., Granbury, Texas		
Grand Rapids Osteopathic Hospital, 1919 Boston St., S. E., Grand Rapids 6, Mich.	x	ANES-1; OBGS-1; PD-1; RAD-2; S-4
Grandview Hospital, 405 Grand Ave., Dayton 10, Ohio	x	ANES-3; I-4; OALR-2; OBG-3; OR-2; PATH-3; PD-2; RAD-3; S-5
Green Cross General Hospital, 1900 Twenty-Third St., Cuyahoga Falls, Ohio	x	ANES-1; I-1; RTD-1; S-1

Teaching hospitals are printed in *italics*	Teaching hospitals approved for Internships	Residencies
Harrison Miller Memorial Hospital, 210 N. Clark, Hinton, Okla.		
Hillcrest Osteopathic Hospital, 2129 S. W. 59th St., Oklahoma City, Okla.		
Hospitals of the Kansas City College of Osteopathy and Surgery	x	ANES-2; I-3; PATH-3; PD-2; PR-1; RAD-2; S-3
Osteopathic Hospital, 11th and Harrison Sts., Kansas City, Mo.		
Conley Maternity Hospital, 2105 Independence Ave., Kansas City, Mo.		
Hospitals of the Philadelphia College of Osteopathy	x	ANES-6; I-5; OALR-2; OBGS-3; OR-2; PATH-4; PD-2; RAD-5; S-5; US-1
The Hospital of Philadelphia College of Osteopathy, 48th and Spruce Sts., Philadelphia, Pa.		
North Center Hospital of Philadelphia College of Osteopathy, 20th St. and Susquehanna Ave., Philadelphia, Pa.		
Houston Osteopathic Hospital, 5115 Montrose Blvd., Houston 6, Texas		
Humphreys Osteopathic Hospital, Tuscumbia, Mo.		
Hustisford Hospital, Juneau and Ridge Sts., Hustisford, Wis.		
Jackson Osteopathic Hospital, 121 Seymour St., Jackson, Mich.		
James A. Taylor Osteopathic Hospital, 268 Stillwater Ave., Bangor, Me.	x	RT-1; S-1
Joplin General Hospital, 521 W. Fourth St., Joplin, Mo.		
Juniata Park Medical Center, 1331 E. Wyoming Ave., Philadelphia, Pa.		
Kirksville Osteopathic Hospital, 800 W. Jefferson, Kirksville, Mo.	x	ANES-2; I-3; OALR-2; PATH-2; PD-2; RT-2; S-2
Lakeside Hospital, 29th and Flora, Kansas City 3, Mo.	x	OBGS-1; RAD-1; S-2
Lakeview General Hospital, 80 N. 20th St., Battle Creek, Mich.	x	S-1
Lakeview Hospital, 1749 N. Prospect Ave., Milwaukee 2, Wis.	x	I-1; S-1
Lake Worth Osteopathic Hospital, 6613 Jacksboro Hwy., Fort Worth, Texas		
Lamb Memorial Hospital, 1535 Park Ave., Denver 18, Colo.		
Lancaster Osteopathic Hospital, 1100 E. Orange St., Lancaster, Pa.	x	ANES-1; I-1; PATH-1; RT-1; S-2
Lansing General Hospital, 2800 Devonshire, Lansing, Mich.	x	PATH-1
Laughlin Hospital and Clinic, 711-715 W. Jefferson, Kirksville, Mo.	x	RTD-1; S-2
†*Le Roy Hospital,* 40 E. 61st St., New York 21, N. Y.	x	ANES-1
Lincoln Park Osteopathic Hospital, 1200 N. 12th St., Grand Junction, Colo.		
Longs Peak Osteopathic Hospital, 500 Ninth Ave., Longmont, Colo.		
Los Angeles County Osteopathic Hospital, 1200 N. State St., Los Angeles 33, Calif.	x	ANES-6; I-14; NNS-4; OALR-4; OBGS-4; OR-4; PATH-5; PD-5; PM-3; RAD-5; S-4; US-3
Lubbock Osteopathic Hospital, 5301 College Ave., Lubbock, Texas		
Madison Street Hospital, 1620 Eighteenth Ave., Seattle 22, Wash.	x	
Mahoning Valley Green Cross Hospital, 1320 Mahoning Ave., N. W., Warren, Ohio		
Manning General Hospital, 416 Main St., Manning, Iowa		
Marcom Hospital, 100 Bonham St., Ladonia, Texas		
Margaret Lyle Osteopathic Hospital, 952 Euclid Ave., Benton Harbor, Mich.		
Martin Place Hospital, 58 Martin Place, Detroit 1, Mich.		
Massachusetts Osteopathic Hospital, 222 S. Huntington Ave., Boston 30, Mass.	x	S-1
Mecosta County Memorial Hospital, Stanwood, Mich.		
Memorial Hospital, Onekama, Mich.		
Memorial Osteopathic Hospital, 528 Morris Ave., Elizabeth 3, N. J.		
Mesa General Hospital, 715 Country Club Dr., Mesa, Ariz.		
Mesa Memorial Hospital, Tenth and Grand, Grand Junction, Colo.	x	
Metropolitan Hospital, 300 Spruce St., Philadelphia, Pa.	x	ALR-1; ANES-2; I-3; OBGS-2; OR-1; PATH-3; PD-1; RAD-2; S-3; US-1
Mid-Cities Memorial Hospital, 2733 Sherman Rd., Grand Prairie, Texas	x	S-1
Miles Osteopathic Hospital, 213 E. College St., Grapevine, Texas		
Mineola General Hospital, P. O. Box 248, Mineola, Texas		
Mineral Area Osteopathic Hospital, Route One, Farmington, Mo.	x	
Mount Clemens General Hospital, 1000 Harrington Blvd., Mount Clemens, Mich.	x	ANES-2; I-2; OALR-1; PATH-2; RT-1; S-2
Mt. Pleasant Hospital and Clinic, 509 N. Madison Ave., Mt. Pleasant, Texas		
Muskegon Osteopathic Hospital, 353 W. Webster Ave., Muskegon, Mich.	x	RTD-1
New Valley Osteopathic Hospital, 3003 Tieton Dr., Yakima, Wash.		
Normandy Osteopathic Hospital, 7840 Natural Bridge Rd., St. Louis 21, Mo.	x	ANES-2; I-1; RT-1; S-2

†Dual staff

Teaching hospitals are printed in *italics*	Teaching hospitals approved for: Internships	Residencies
Northeast Osteopathic Hospital, 620 Bennington Ave., Kansas City 25, Mo.		
Northeastern Ohio General Hospital, Hubbard and Chapel Rds., North Madison, Ohio		
Northwest General Osteopathic Hospital, 8741 W. Chicago, Detroit 4, Mich.		
Northwest Hospital, 1060 N.W. 79th St., Miami 50, Fla.	x	
Oklahoma Osteopathic Hospital, 9th and 11th Sts., on Jackson Ave., Tulsa, Okla.	x	I-2; PR-1; RTD-1; S-2
Orlando Osteopathic Hospital, 603 Hillcrest Ave., Orlando, Fla.		
Ormond Beach Hospital, 264 S. Atlantic Ave., Ormond Beach, Fla.		
Orrville Community Osteopathic Hospital, 230 S. Crown Hill Rd., Orrville, Ohio		
Osteopathic General Hospital of Rhode Island, 1763 Broad St., Edgewood 5, Cranston, R. I.	x	RTD-1
Osteopathic Hospital of Harrisburg, 1829 N. Front St., Harrisburg, Pa.	x	I-1; PD-1
Osteopathic Hospital of Maine, 335 Brighton Ave., Portland 4, Maine	x	ANES-2; I-2; PATH-1; RAD-1; S-2
Ottawa General Hospital, 900 E. Center St., Ottawa, Ill.		
Palmer Osteopathic Hospital, 18160 Woodward Ave., Detroit 3, Mich.		
Park Foothills Clinic and Hospital, 8201 Sheridan Rd., El Paso, Texas		
Parkview Hospital, 1920 Parkwood Ave., Toledo 2, Ohio	x	RT-1
Phoenix General Hospital, 1950 W. Indian School Rd., Phoenix, Ariz.	x	
Point Clinic and Hospital, 512½ Main St., Point Pleasant, W. Va.		
Pontiac Osteopathic Hospital, 50 N. Perry Ave., Pontiac, Mich.	x	RAD-1; S-2
Pool Memorial Hospital, 17 W. Chickasaw, Lindsay, Okla.		
Porter Clinic-Hospital, 2401 Nineteenth St., Lubbock, Texas		
Portland Osteopathic Hospital, 2900 E. Steele St., Portland 9, Ore.	x	RAD-1
Redfield Clinic Hospital, Redfield, Iowa		
Riverside Hospital, Clifton Park Manor, Wilmington 2, Del.	x	ANES-1
Riverside Osteopathic Hospital, 165 George St., Trenton, Mich.	x	ANES-2; I-2; OBGS-3; RTD-1; S-2; OR-1
Riverview Osteopathic Hospital, 740 Sandy St., Norristown, Pa.	x	ANES-1; I-1; RT-1; S-1
Rocky Mountain Osteopathic Hospital, 4701 E. Ninth Ave., Denver 20, Colo.	x	RAD-2; S-1
Saco Osteopathic Hospital, 3 Nott St., Saco, Maine		
Saginaw Osteopathic Hospital, 515 N. Michigan Ave., Saginaw, Mich.	x	ANES-2; RAD-1; S-2
San Antonio Osteopathic Hospital, 210 W. Ashby, San Antonio 2, Texas		
Sandusky Hospital-Clinic, 47 Austin St., Sandusky, Mich.		
Sandusky Memorial Hospital, 2020 Hayes Ave., Sandusky, Ohio	x	
Selby General Hospital, 304 Putnam St., Marietta, Ohio	x	
Sheridan Community Hospital, 301 N. Main St., Sheridan, Mich.		
South Bend Osteopathic Hospital, 2515 E. Jefferson Blvd., South Bend 1, Ind.	x	OBG-1; RT-1
Standring Memorial Osteopathic Hospital, 12845-12th Ave., S.W., Seattle 66, Wash.	x	
Stevens Park Osteopathic Hospital, 1141 N. Hampton Rd., Dallas 8, Texas	x	
Still-Hildreth Osteopathic Sanatorium, Macon, Mo.		
Stocker Hospital and Clinic, 1005 N. Lake Rd., Oconomowoc, Wis.		
Stratton Hospital and Clinic, 306-308 E. Broadway, Cuero, Texas		
Sun Coast Osteopathic Hospital, 2025 Indian Rocks Rd., Largo, Fla.		
Talco Hospital and Clinic, 4th and Lillianstern Sts., Talco, Texas		
Tavel Clinic and Hospital, 4809 Austin St., Houston 4, Texas		
Tigua General Hospital, 7722 N. Loop Rd., El Paso, Texas		
Traverse City Osteopathic Hospital, 625 Bay St., Traverse City, Mich.	x	
Trenton Osteopathic Hospital, 200 High St., Trenton, Tenn.		
Troy Community Hospital, 100 John St., Troy, Pa.		
Tucson General Hospital, 3838 N. Campbell Ave., Tucson, Ariz.	x	RTD-1
Valley General Hospital, 607 White Horse Pike, Audubon, N. J.		
Vowell, C. B., Memorial Hospital, 701 S. Campbell St., El Paso, Texas		
Waldo General Hospital, 8511 Fifteenth Ave., N.E., Seattle 15, Wash.	x	
Warren General Hospital, 667 Eastland Ave., S.E., Warren, Ohio	x	
Waterville Osteopathic Hospital, 83 Western Ave., Waterville, Maine	x	
West Allegheny Hospital, Lincoln Hwy., Oakdale, Pa.		
West Side Osteopathic Hospital of York, 1253 W. Market St., York, Pa.	x	I-2; OR-1; RAD-2; S-2
Wetzel Osteopathic Hospital, 1302-04 N. Main St., Carrollton, Mo.		
Wetzel Osteopathic Hospital, 105 E. Ohio St., Clinton, Mo.	x	S-1
Whitaker Osteopathic Hospital, 205 S. Fifth St., Moberly, Mo.		
Wilden Osteopathic Hospital, 1347 Capitol, Des Moines 16, Iowa	x	I-1; RTD-1; S-1

Wolfe City Hospital, Jones St., Wolfe City, Texas
Wolfe-Duphorne Hospital, 108 S. Pinkerton, Athens, Texas
Yale Clinic and Hospital, 510 W. Hamilton, Houston 18, Texas
Youngstown Osteopathic Hospital, 1319 Florencedale Ave., Youngstown, Ohio x
Zieger Osteopathic Hospital, 4244 Livernois Ave., Detroit 10, Mich. x ANES-1; I-2; OBG-3; PATH-1; RT-2; S-2

ALR	Otolaryngology or Otorhinolaryngology	OBG	Obstetrics and Gynecology	RAD	Radiology
ANES	Anesthesiology	OBGS	Obstetrical-Gynecological Surgery	RT	Roentgenology
I	Internal Medicine	OPH	Ophthalmology	RTD	Roentgenology (Diagnostic)
N	Neurology	OR	Orthopedic Surgery	S	Surgery (General)
NS	Neurosurgery	PATH	Pathology	US	Urological Surgery
OALR	Ophthalmology and Otolaryngology or Ophthalmology and Otorhinolaryngology	PD	Pediatrics		
		PM	Physical Medicine and Rehabilitation		
		PR	Proctology		

Amendments to the Constitution, By-Laws and Code of Ethics of the American Osteopathic Association

[redacted]

True B. Eveleth, D.O., Executive Director, Chicago

The following amendments were adopted by the House of Delegates at its annual meeting July 9-12, 1961. The increase in dues will be effective at the beginning of the next fiscal year, June 1, 1962.

Constitution

(The following amendments to the Constitution clarify references to annual meetings and annual conventions, and succession to the presidency.)

ARTICLE VII—OFFICERS

Amend the Article by deleting the word "convention" in the last sentence of the first paragraph of the Article and substituting therefor the words "meeting of the House of Delegates." The sentence now reads: "The President-Elect shall automatically succeed to the Presidency upon his installation, during the annual meeting of the House of Delegates following his election to the office of President-Elect."

Amend paragraph two by changing the wording to read: "In case of inability upon the part of the President to serve during the term of office for which he has been elected, the responsibility of filling the office of President shall devolve upon the Board of Trustees."

By-Laws

(The following amendments to Article II clarify procedures for membership applications, provide for dual membership, and for disciplining disloyal members.)

ARTICLE II—MEMBERSHIP

Article II, Section 1, was amended to read as follows:

Sec. 1. An applicant for regular membership in this Association shall be a graduate of a college of osteopathy approved by the American Osteopathic Association, and shall make application upon the prescribed form with the endorsement of the secretary of the divisional society in the state, province, or foreign country in which the applicant resides.

The applicant shall either show evidence of membership in the recognized divisional society in the state, province, or foreign country in which he practices or shall have made application for mem-

bership in said recognized divisional society. The applicant for A.O.A. membership shall make application upon the prescribed form which shall be accompanied by the full amount of the dues for a year's membership, such dues to be prorated for the remaining months of the current fiscal year and the balance of the payment to apply as part payment on dues for the succeeding year. The name of the applicant shall be published in THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION. If no objections are received within thirty days, the Executive Director shall, upon evidence that the applicant is a member of his recognized divisional society, enroll the applicant as a regular member and notify the divisional society officials of his action. If objection is filed within a specified time the Board of Trustees shall make full investigation and take such action as its findings warrant. Continuing regular membership in any recognized divisional society shall be dependent upon continuing membership in the A.O.A.

Continuing membership in the American Osteopathic Association shall be dependent upon the member maintaining membership in the recognized divisional society of the state, province, or foreign country in which the applicant is engaged in practice as an osteopathic physician and/or surgeon. Likewise, continuing membership in a chartered divisional society shall be dependent on continuing membership in the A.O.A.

The membership of any member of the Association who, in the opinion of the Executive Committee of the Association, purposely and persistently violates the established policy of the Association or who seeks to undermine the unity of the osteopathic profession or of any of its divisional societies or affiliated organizations may be revoked, suspended, or placed on probation by action of the Executive Committee of the Association upon the recommendation of the Committee on Membership, after the member has been given notice and an opportunity to be heard before such action is taken. Any individual whose membership has been so revoked, suspended, or placed on probation shall have the right of appeal to the Board of Trustees of the A.O.A. at its next regular meeting, requesting a review of the action of the Executive Committee, and the Board of Trustees, on review, may in its discretion take such action in regard thereto as it deems appropriate.

(The following amendment raises the annual dues for members in the amounts indicated. It will become effective June 1, 1962.)

ARTICLE III—FEES AND DUES

Amend Section 1 by deleting in the first paragraph of the Article the words and figures "seventy-five dollars ($75.00)" and substituting therefor the words and figures "one hundred dollars ($100.00)."

Amend Section 1 by deleting in the first sentence of the third paragraph of the Article the words and figures "twenty dollars ($20.00)" and substituting therefor the words and figures "thirty dollars ($30.00)," and by deleting the words and figures "thirty-seven dollars and fifty cents ($37.50)" and substituting therefor the words and figures "fifty dollars ($50.00)." The sentence would then read: "Dues for regular members during the first, second and third years, immediately after graduation or internship, shall be five dollars ($5.00) for the first year, thirty dollars ($30.00) for the second year, and fifty dollars ($50.00) for the third year."

(The following amendment removes the provision for joint memberships.)

Further amend Section 1 of Article III by the deletion of the second paragraph of Section 1 which reads: "Each additional regular member of an immediate family practicing together from the same office may receive, concurrently, full membership privileges in return for an additional payment of an amount equal to fifty per cent (50%) of the annual dues of regular members, except that in such cases only one copy of each issue of THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION, D.O., and HEALTH—AN OSTEOPATHIC PUBLICATION shall be provided."

(The following amendment clarifies the power of the Board of Trustees.)

ARTICLE VIII—DUTIES OF BOARD OF TRUSTEES

Amend Section 6 by deleting the section and substituting therefor the following: "The Board shall have the power, after careful investigation and by a three-fourths vote, to remove any officer or to revoke, suspend, or place on probation the charter of any divisional society of this Association when, in its opinion, the best interests of the Association would be served thereby."

Code of Ethics

(The following amendments to Section 6 of Article I of Chapter II of the Code of Ethics clarify the section.)

CHAPTER II—THE DUTIES OF PHYSICIANS TO EACH OTHER AND THE PROFESSION AT LARGE

Amend Article I of Chapter II, by deleting the present Section 6 and substituting therefor the following:

"Sec. 6 (a) It is unethical for a physician or institution to commercialize or advertise their services or to be associated with a physician or institution which does. A physician or institution may make when needed dignified public statements, reports or announcements such as are usual and customary for physicians and institutions in their area, and which are approved by the divisional society.

"(b) The A.O.A. and the divisional societies may

and should make available to the public needed health, professional and educational information, and may in their discretion authorize the names of doctors or institutions or other information to be used in connection therewith when necessary. The A.O.A. and divisional societies may delegate such responsibilities or duties to the local or district society if desired or necessary."

House Committee on Credentials

A. R. Fuller, Chairman, Fremont, Ohio

Divisional Society	A.O.A. Members	Delegates	Vote	Delegates Seated
Alabama	3	1	1	(Not represented)
Alaska	1			(No organization)
Arizona	150	2	7	F. P. McCann
				Leonard Staff, Jr.
Arkansas	9	1	1	H. V. Glenn
California	2,054	21	100	Richard E. Eby
				J. Gordon Hatfield
				David Dobreer
				Joseph P. Linden, Jr.
				Howard K. Gifford
				James E. Franklin
				Evelyn Brisbane
				Augusta T. Tueckes
				Gladys Shutt
				Walter V. Goodfellow
				Robert D. Schroeder
				Mark McCornack
				Russell E. Fiala
				Lawrence Crow
Colorado	188	3	9	C. R. Patterson
				Wm. H. Hayes
				C. R. Starks, Jr.
Connecticut	30	1	1	James T. Berry
Delaware	31	1	1	John C. Bradford, Sr.
Dist. of Col.	12	1	1	Albert F. Dilworth
Florida	379	5	18	W. S. Horn
				Paul E. Wilson
				George W. Frison, Sr.
				B. M. Routzahn
				B. B. Slaughter
Georgia	43	1	2	Richard A. Payne
Hawaii	9	1	1	(Not represented)
Idaho	17	1	1	(Not represented)
Illinois	227	3	11	Louise W. Astell
				Merwyn G. Miller
				George F. Marjan
Indiana	163	2	8	James H. McCormick
				James A. Dillon
Iowa	310	4	15	Jean F. LeRoque
				John W. Campbell
				J. R. McNerney
				John Q. A. Mattern
				John P. Schwartz, Jr.
Kansas	129	2	6	B. L. Gleason
				R. L. Wright
Kentucky	26	1	1	Paul E. Dunbar
Louisiana	14	1	1	Charles S. Wyckoff
Maine	145	2	7	Lawrence W. Bailey
				Robert J. Meehan
Maryland	9	1	1	Morris C. Augur
Massachusetts	132	2	6	William A. Seeglitz
				W. Hadley Hoyt, Jr.
Michigan	1,499	16	74	Donald L. Cummings
				W. Clemens Andreen
				Donald J. Evans
				Alan M. Potts
				E. George Textor
				Robert E. Benson
				J. Vincent Murphy
				John H. Morrison
				B. F. Dickinson
				A. H. Fuller
				Marvin L. Logue
				O. L. Brooker
				Otterbein Dressler
				Raymond A. Gadowski
				P. N. Munroe
				Jack D. Comstock
				O. Keith Pauley
Minnesota	60	1	3	Dale Dodson
Mississippi	2			(No organization)
Missouri	834	9	41	G. H. Kroeger
				Wilbur T. Hill
				J. Myron Auld, Jr.
				John C. Taylor
				W. A. Rohlfing
				H. N. Tospon
				G. W. Ringland
				Floyd E. Dunn
				C. A. Rohweder
Montana	7	1	1	L. F. Howard
Nebraska	33	1	1	J. R. Swanson
Nevada	17	1	1	Oliver W. Shelksohn
New Hampshire	15	1	1	William L. Johnston
New Jersey	345	4	17	Alex E. Maron
				Martin C. Cassett
				Henry Palmaffy
				George W. Northup
New Mexico	82	2	4	H. D. Thomas
New York	348	4	17	William E. Kaufmann
				Francis J. Beall, Jr.
				C. Fred Peckham
				George F. Johnson
North Carolina	18	1	1	Joseph H. Huff
North Dakota	9	1	1	Georgianna Pfeiffer
Ohio	768	8	38	Carl Gephart
				Leonard D. Sells
				J. M. Wright
				A. R. Fuller
				John W. Hayes
				Jack Hutchison
				Donald J. Ulrich
				Donald Siehl

Divisional Society	A.O.A. Members	Delegates	Vote	Delegates Seated
Oklahoma	303	4	15	R. D. McCullough
				Ray Thompson
				P. R. Riemer
				E. F. Ross
Oregon	120	2	6	J. Scott Heatherington
				Paul T. Rutter
Pennsylvania	1,029	11	51	David Shuman
				Stephen E. Cronen
				George B. Stineman
				William Baldwin
				George S. Esayian
				Aaron A. Feinstein
				Alfred A. Grilli
				Henry N. Hillard
				William L. Silverman
				John H. Warren
				Paul S. Young
				W. S. Spaeth
Rhode Island	61	1	3	(Not represented)
South Carolina	4	1	1	(Not represented)
South Dakota	32	1	1	(Not represented)
Tennessee	52	1	2	Marion E. Coy
Texas	565	6	28	Loren R. Rohr
				Clifford E. Dickey
				Samuel B. Ganz
				A. Roland Young
				M. G. Holcomb
				Elmer C. Baum
Utah	14	1	1	C. E. Conklin
Vermont	18	1	1	C. Harry Vaughan*
Virginia	26	1	1	Ralph M. Stokes, Jr.
Washington	140	2	7	Richard S. Koch
				Lon A. Hoover
West Virginia	84	2	4	Lloyd A. Dunbar
				Hoy E. Eakle
Wisconsin	130	2	6	James S. Crane
				James W. Stout
Wyoming	8	1	1	(Not represented)
British Columbia	8	1	1	(Not represented)
Manitoba	3	1	1	(Not represented)
New Brunswick	1			(No organization)
Ontario	26	1	1	William K. Church
Quebec	3	1	1	(Not represented)
Nova Scotia	1			(No organization)
Saskatchewan	2	1	1	(Not represented)
B.O.A. (Foreign)	29	1	1	(Not represented)
Australia (includes New Zealand)	8	1	1	(Not represented)

*Seated as representative, without vote.

Editor's Note—No delegation had more than the prescribed number of delegates at any one time. Only delegates properly certified within the time limit were seated.

This section is published monthly to inform the practicing physician about new drug products and medical equipment made available on the market. It is a reference section prepared by THE JOURNAL *from descriptive material furnished by ethical manufacturers. The American Osteopathic Association does not necessarily advocate the use of these products nor disapprove any product not included. The purpose of the section is to provide trustworthy information in a convenient form.*

PRODUCT NEWS

F. B. CAST CUSHION

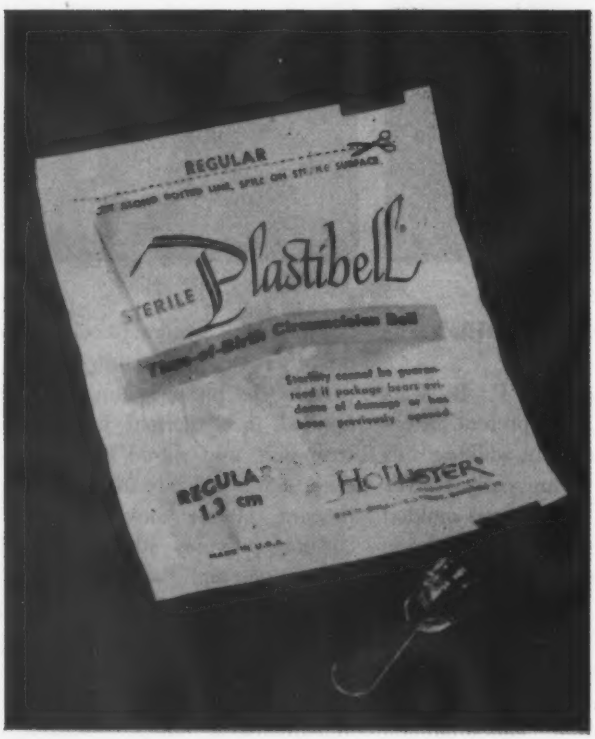
Description • The F. B. Cast Cushion is said to represent an entirely new concept in walking aids for patients wearing casts on the legs. It is a walking-heel molded of rubber selected for optimum flexibility, strength, and resiliency. The cushion is lower in height than previous walking-heels, to provide greater comfort and reduce the possibility of a forced limp; the wide base makes for maximum stability. It is easily applied and can be anchored more securely than conventional walking-heels. The deep criss-cross section spacing permits the plaster bandage to be applied in a normal figure-eight wrapping, and raised tips on the inner side set firmly in the cast to prevent lateral movement. The cushion provides adequate shock absorption, and the special tread prevents slipping and will not mar floors.

Manufacturer • DePuy Manufacturing Company, Incorporated, Warsaw, Indiana.

PLASTIBELL®

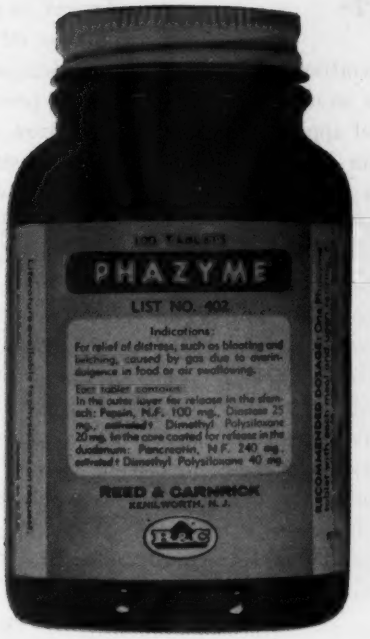
Description • Hollister's Plastibell, for delivery room circumcision, is now supplied in individual gas-sterilized packets at no increase in price.

The Plastibell is a disposable device which permits at-birth circumcision in 2 or 3 minutes. With this method no sterile pack is required and bleeding is minimized. As there is no open wound, there is usually a clean-healed line of excision by the time the baby goes home. The only instruments required are scissors and a pair of hemostats. If circumcision at birth is contraindicated, the Plastibell method may be used by the physician at a later date.



How supplied • Each presterilized packet contains one Plastibell and one linen suture. Plastibells are supplied in three sizes: large, 1.5 cm.; regular, 1.3 cm.; and small, 1.1 cm. Additional information and free samples may be obtained from the manufacturer.

Manufacturer • Hollister Incorporated, 833 N. Orleans St., Chicago 10, Ill.



PHAZYME[T.M.]

Chemistry • Each dual-phase tablet of Phazyme contains in the outer layer 100 mg. pepsin N.F., 25 mg. diastase, and 20 mg. specially activated dimethyl polysiloxane. An enteric-coated core releases in the intestine 240 mg. pancreatin N.F. and 40 mg. specially activated dimethyl polysiloxane.

Pharmacodynamics • Phazyme is a digestive aid which acts locally in the gastrointestinal tract. The digestive enzymes in Phazyme are designed for release at appropriate sites, permitting more complete utilization of foods during the digestive process and minimizing flatulence associated with enzyme deficiency or food intolerances. In addition, the specially activated dimethyl polysiloxane inhibits entrapment of gas, or if gas pockets are present, disperses them by rapidly disintegrating the enveloping membranes. Thus the effect of Phazyme is to relieve discomforts of gastrointestinal gas due to aerophagia, food intolerance, or enzyme deficiency, to release entrapped gas, and to prevent further entrapment of ingested air or other gastrointestinal gas.

Absorption; fate; excretion • Phazyme is not absorbed; its action is entirely within the gastrointestinal tract and its components are eliminated in the feces.

Toxicology • No side effects or toxic reactions to Phazyme have been reported.

Indications • Phazyme is recommended alone or as adjunctive therapy in gas distress due to aerophagia, food intolerance and overindulgence, and other functional or organic conditions where gas is a problem.

Contraindications • No contraindications to the use of Phazyme have been encountered.

Dosage schedule • The usual dose of Phazyme is 1 tablet with meals and upon retiring; otherwise as required by the individual patient.

How supplied • Phazyme is available in two-phase release tablets, pink, in bottles of 50 and 100.

Manufacturer • Reed & Carnrick, Kenilworth, New Jersey.

DESITIN HYDROCORTISONE PRODUCTS

Chemistry • Hydrocortisone (alcohol) 1 per cent is available in three forms for topical application. Hydrocortisone Cream (1%) provides the hormone in a greaseless, stainless, nonstinging, water-miscible base. HC Ointment with hydrocortisone incorporates the hormone in a cod liver oil base with zinc oxide, talcum, petrolatum, and lanolin. Cor-D-Tar Cream combines hydrocortisone alcohol 1 per cent, diiodohydroxyquinoline 2 per cent, and solution of coal tar 3 per cent, in a cream base containing methylparaben, propylparaben, sodium lauryl sulfate, propylene glycol, stearyl alcohol, petrolatum, and water.

Pharmacodynamics • In topical therapy of skin disorders, the three hormone preparations act to relieve inflammation, pruritus, and allergic reactions, through the well-established effectiveness of the corticosteroid agent. In addition, the external cod liver oil formula of HC Ointment is designed to ease pain and facilitate protection, lubrication, granulation, epithelization, and healing. The vitamins A and D in cod liver oil are dermatologically useful, and its unsaturated fatty acids resemble those present in the skin and important to its integrity. The diiodohydroxyquinolone in Cor-D-Tar cream exerts positive bactericidal and fungicidal activity without incurring skin sensitivity or antibiotic resistance. The solution of coal tar (liquor carbonis detergens) exerts keratolytic and "reducing" action, minimizing excoriation and easing the removal of scales and crusts in eczematous and psoriatic conditions.

Indications • Desitin Hydrocortisone Cream is indicated for eczematoid, atopic, contact, and stasis dermatitis; neurodermatitis; and nonspecific anogenital pruritus. Desitin HC Ointment with Hydrocortisone is specifically recommended for severe diaper rash, eczemas, wounds, burns, external ulcers, fissures, dermatoses, and inflammatory intertrigo. Cor-D-Tar Cream is recommended for the conservative management of persistent, subacute, or chronic dermatoses, particularly when the inflammation is accompanied by increased scaling and lichenification with secondary bacterial or fungus infection. Thus, in addition to the conditions mentioned above, the specific uses of Cor-D-Tar Cream include psoriasis, impetigo, and pyodermas in general.

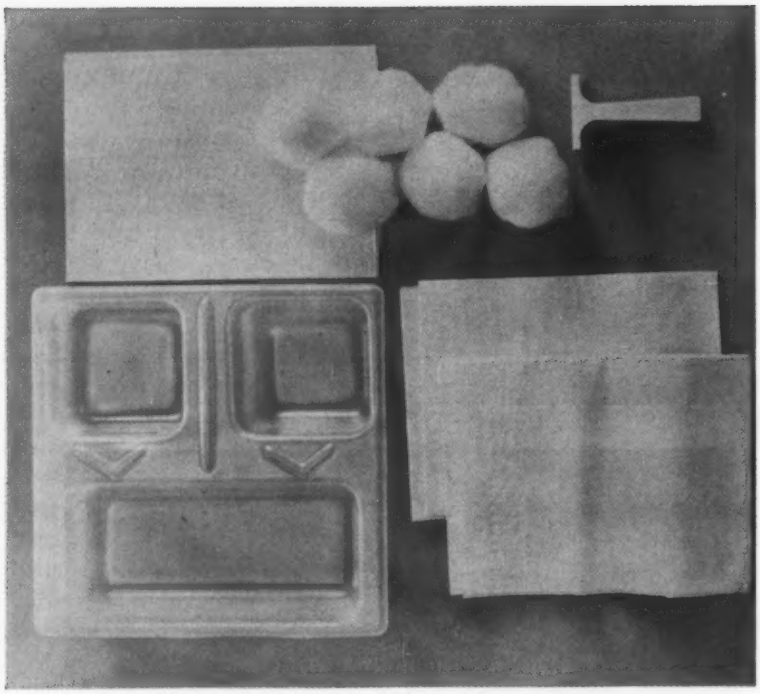
Contraindications • As with other topical anti-inflammatory steroid hormones, hydrocortisone preparations should not be applied to tuberculosis of the skin. When unresponsive organisms are encountered, adequate control measures should be instituted.

Dosage schedule • The creams and ointment are applied to the skin, in small quantities, several times a day, as indicated. Gauze dressings may be used if it seems desirable.

How supplied • Desitin Hydrocortisone Cream (1%), tubes of ½ ounce and 1 ounce. Desitin HC Ointment with Hydrocortisone, tubes of ½ and 1 ounce. Desitin Cor-D-Tar Cream, tubes of ½ and 1 ounce. Federal law prohibits dispensing without prescription.

Manufacturer • Desitin Chemical Company, Providence 4, Rhode Island.

References • Modell, W., in Drugs of Choice 1960-61, p. 745. Sulzberger, M. B., Witten, V. H., and Kopf, A. W., Postgrad. Med. 24:379, 1958. Moynahan, E. J., Amer. Pract. & Digest. Treat. 11:877, 1960.



DAVOL STERILE DISPOSABLE PREP SET

Description • A new set for use in the preparation of surgery patients combines the advantages of convenience, economy, and sterility. The set contains a molded plastic razor including surgical blade, cotton balls, two absorbent towels, plastic-coated towel which can be used to cover the equipment during transportation to the bedside and then to protect the bed linen as a replacement for the customary rubber sheet, and a multi-cupped tray with molded plastic basins to accommodate the components of the specific technic being used. The Prep Set is reported to improve the care of the patient, reduce danger of cross-infection, and eliminate the time and labor involved in autoclaving hospital-prepared sets. The new set is prepacked in a compact form and can be stored in quantity in utility rooms ready for immediate use.

Manufacturer • Davol Rubber Company, Providence, Rhode Island.

BIPHETAMINE®-T

Chemistry • Biphetamine-T is an anoretic agent combining d-amphetamine, dl-amphetamine, and Tuazole (2-methyl-3-orthotolyl-4-quinazolone), as cation exchange resin complexes of sulfonated polystyrene.

Pharmacodynamics • The action of Biphetamine-T is chiefly that of the sympathomimetic components; the combination provides 10-14 hour appeasement with mild invigoration and calmative action. The drug has been reported to provide sustained weight control in obese patients who are refractory to existing methods of treatment or who become refractory after 3 to 6 weeks on existing treatments.

Toxicology • When side effects occur, they may include dryness of the mouth, insomnia, and other signs of mild central nervous stimulation. Accidental overdosage may be treated by lavage, catharsis, and sedation.

Indications • Biphetamine-T is specifically indicated for exogenic obesity that has proved refractory to other forms of treatment.

Contraindications • Although clinical studies have demonstrated that Biphetamine-T is safe and effective in obesity complicated by diabetes, arteriosclerosis, or hypertension, treatment should be initiated with caution in cases of hypertension, cardiac disease, or hypersensitivity to sympathomimetic agents.

Dosage schedule • The usual dose is 1 capsule daily, on arising.

How supplied • Biphetamine-T "12½" is supplied in black and green capsules each containing 6.25 mg. of each of the amphetamines and 40 mg. of Tuazole; Biphetamine-T "20"—each black and red capsule contains 10 mg. of each amphetamine and 40 mg. of Tuazole.

Manufacturer • Strasenburgh Laboratories, Rochester, New York.

References • Cass, L. J., Ann. Int. Med. 51:1295, 1959. Cohen, B. M., Clin. Session Am. M. A., Dec. 1959. LeRiche, H., Canad. M. A. J. 82:467, 1960.

MILURETIC™

Chemistry • Miluretic tablets contain 25 mg. of hydrochlorothiazide and 200 mg. of meprobamate (Miltown).

Pharmacodynamics • Miluretic tablets provide diuretic-antihypertensive action combined with the effects of a muscle-relaxing tranquilizer. Hydrochlorothiazide, the 3,4-dihydro derivative of chlorothiazide, has properties qualitatively similar to the latter. Its principal action is a marked enhancement of the excretion of sodium and chloride; excretion of bicarbonate is minimal, and metabolic acidosis is an extremely unlikely complication of therapy with hydrochlorothiazide. The onset of action following oral administration occurs within 2 hours and the maximum effect within 6 to 12 hours; some saluretic effect is manifested for 18 hours. Thus hydrochlorothiazide provides continuous diuretic effectiveness, in the presence of fluid retention, with repeated daily administration in single or multiple doses. Miltown is an interneuronal blocking agent that inhibits transmission of nerve impulses in internuncial circuits without any apparent effect on transmission at the myoneural junction or in the peripheral nerves. Its action is highly selective for the central nervous system, particularly the thalamus. Autonomic functions are not significantly affected with therapeutic doses. Miltown blocks polysynaptic reflexes, in which one or more interneurons are involved, but has little effect on monosynaptic reflexes. Clinically, Miltown is used as a tranquilizer-muscle relaxant and as an anticonvulsant. Administered orally, the therapeutic effect is usually evident in about ½ hour and lasts about 6 hours.

Toxicology • The side effects of hydrochlorothiazide are chiefly those of fluid and electrolyte imbalances, and the early clinical signs and symptoms include dryness of the mouth, thirst, weakness, lethargy, drowsiness or restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, gastrointestinal disturbances, and tachycardia. The level of serum electrolytes should be determined before treatment is instituted. With meprobamate, however, few side effects have been noted. Drowsiness and fatigue may occur during the first few days of medication, and allergic skin rash has been reported. More severe allergic reactions have been reported in rare cases. Drug dependence may occur in susceptible persons, and withdrawal symptoms should be guarded against when the drug has been administered over long periods. Although meprobamate has been used with benefit in some patients with idiopathic petit mal, it appears to have precipitated grand mal seizures in certain patients subject to both types of convulsion.

Indications • Miluretic is indicated for the treatment of hypertension with or without congestive heart failure, for all types of congestive heart failure requiring diuretic therapy and involving psychic factors, and for the management of premenstrual tension when fluid fetention is involved. Miluretic is especially indicated when any of these conditions are complicated by anxiety and tension.

Contraindications • Hydrochlorothiazide is contraindicated in the presence of anuria, and should be used with caution in cases of renal and hepatic edema. Caution should be observed also in treating post-

surgical patients with a tendency to hypokalemia, as well as patients with advanced cirrhosis. With regard to meprobamate, treatment is contraindicated for patients known to have had an allergic reaction to the drug.

Dosage schedule • For hypertension, the usual adult dosage is 1 Miluretic tablet four times daily; when treatment is instituted the dosage of other antihypertensive compounds, particularly the ganglion-blocking agents, should be reduced by 50 per cent. In congestive heart failure, the adult dosage is 2 Miluretic tablets four times a day, but it is imperative that the dosage be adjusted upward or downward as frequently as the changing needs of the individual patient demand. For premenstrual tension, the dosage is 1 tablet once or twice a day, beginning the first morning of symptoms and continuing until the onset of menses, or through the menstrual period if necessary.

How supplied • Miluretic is supplied in bottles of 50 white, scored tablets.

Manufacturer • Wallace Laboratories, Cranbury, New Jersey.

ADVANCE CONVENTION REGISTRATION

American Osteopathic Association's 66th Annual Convention

Las Vegas, Nevada, January 15-18, 1962

1962 REGISTRATION RULES

Those who may register are: members of the Association, their children, and their adult guests who are not osteopathic physicians; osteopathic students, osteopathic students' wives; commercial and scientific exhibitors.

Osteopathic physicians who are not members of the Association but appear to be eligible for membership will pay a fee of $75.00 in addition to the $30.00 convention registration fee. Such doctors may thereupon apply for membership at the registration desk, and their $75.00 fee will be applied to their annual dues. All such applications will be put through the regular channels. If the applicant is not acceptable, $50.00 of the $75.00 will be returned and the remainder retained as the registration fee charged nonmembers.

Osteopathic physicians not eligible for membership in the Association may register for the Convention, but only upon the presentation of official, written evidence of current membership in a divisional society of the Association. Such doctors must pay a fee of $25.00 in addition to the $30.00 convention registration fee.

SUMMARY OF INSTRUCTIONS

1. Fill in Advance Registration Form.
2. Give names of adult guests and juvenile guests (under 18 years).
3. Make check payable to: American Osteopathic Association.
4. Mail Advance Registration Form and Check to:

American Osteopathic Association
Bureau of Conventions
212 East Ohio Street
Chicago 11, Illinois

Flamingo Hotel

Dunes Hotel

ADVANCE REGISTRATION FORM

Name_____

_____

Street Address City Zone State

Adult guests_____

Juvenile guests_____

_____

This space for A.O.A. Central Office use, only:

Amount received_____

Date postmarked_____

Date received_____

REGISTRATION FEES

•Member of American Osteopathic Association	$30.00
•Adult guests	$30.00
†Members of AAOA House of Delegates *(Whose husbands are not in attendance)*	$10.00
§Juvenile guests *(under 18 years)*	No Fee
§Students, including interns and residents	No Fee
§Wives of students	No Fee
Nonmembers, but eligible	‡$75.00 plus $30.00
Nonmembers, ineligible	‡$25.00 plus $30.00
Children's activity ticket	$5.00

•Includes tickets for: A.O.A. President's Luncheon, Andrew Taylor Still Lecture and Luncheon, A.O.A. Cordiality Hour, and Alumni Luncheon.

†Includes women's tea only.

§Individual tickets for entertainment events may be purchased.

‡See registration rules on this page.

Hotel Reservation Application

66th Annual Convention
American Osteopathic Association
January 15-18, 1962
Las Vegas, Nevada

Hotels require reservations before January 7. Early application is advised.

Important! Please read these instructions before filling out application form at the right:

1. All reservations must be made directly to:

   A.O.A. Housing Bureau
   FLAMINGO HOTEL
   Las Vegas Boulevard South
   Las Vegas, Nevada

2. Do not send reservations to the local convention arrangements committee or to the American Osteopathic Association Central Office.

3. Classifications of eligible applicants for hotel accommodations: member, officer, trustee, scientific or commercial exhibitor.

4. Activities will take place at the Flamingo and Dunes hotels, and the Las Vegas Convention Center.

SPECIAL A.O.A CONVENTION HOTEL RATES

		SUITES	
	Twin-bedded room (1 or 2 persons)	One bedroom and parlor	Two bedroom and parlor
Flamingo Hotel (Headquarters)	$10.00	$30.00	$45.00
	12.00	35.00	55.00
	14.00	40.00	60.00
	16.00		
Dunes Hotel	$10.00	$30.00	$45.00
	12.00	35.00	55.00
	14.00	40.00	
	16.00		

Note: If a room at the rate requested is not available, a room at the next available rate will be assigned.

PLEASE PRINT OR TYPE AND CHECK HOTEL PREFERENCE

Date of application_____

HOTEL PREFERENCE:

☐ Flamingo Hotel ☐ Dunes Hotel

ACCOMMODATIONS:

☐ Single occupancy (twin beds); rate desired: $_____ per day

☐ Double occupancy (twin beds); rate desired: $_____ per day

☐ One bedroom and parlor suite; rate desired: $_____ per day

☐ Two bedroom and parlor suite; rate desired: $_____ per day

Date of arrival_____ Hour_____

Date of departure_____ Hour_____

OCCUPANTS:

(The name of each hotel guest must be listed. Therefore, please include the names of both persons who will occupy each twin-bedded room requested. Please do not make reservations for anyone without definite agreement with parties involved.) The name and address of each person for whom you are requesting reservations and who will occupy the room is:

_____

_____

APPLICANT:

Name_____

Street Address City Zone State

Name of firm, if commercial exhibitor_____

PROMPTNESS IN COMPLETING THIS FORM WILL INSURE DESIRED HOTEL ACCOMMODATION

CURRENT LITERATURE

All that pains is not arthritis

▶ A highly varied series of cases illustrating the results of uncritical appraisal of musculoskeletal pain is described by Selvan Davison, M.D., in the *New York State Journal of Medicine,* May 1, 1961. Often such pain is quickly relegated to the realm of arthritis, the patient then being subjected to a succession of antirheumatic measures accompanied by the advice to "learn to live with it." In a significant percentage of such instances, careful evaluation of the individual problem will disclose underlying conditions such as neoplasms, disorders of the circulatory, endocrine, neurologic, and gastrointestinal systems, or basic structural defects. Among the 9 cases of neoplastic disease in the reported series, the patients had received antirheumatic treatment for periods of a few months to 4 years before the correct diagnosis was made; in at least 1 case the delay was fatal. Lesions of the gastrointestinal tract and associated structures, for example duodenal ulcer or carcinoma of the pancreas, may cause pain simulating that of musculoskeletal disorders. Cardiovascular lesions are often the source of such pain, especially in elderly patients. The physician is reminded that thrombophlebitis is not restricted to postoperative sequelae, and should be considered in cases of pain in the legs, particularly in women. Any appraisal of musculoskeletal pain should include consideration of endocrine and metabolic disorders; acromegaly, myxedema, and gout are represented among the cases described. Five cases are described in which the "musculoskeletal" pain was actually due to primary disease of the nervous system, including herpes zoster. Among the miscellaneous conditions mentioned, parasternal chondrodynia following a severe virus infection was responsible for the pain in one case, and shortening of the right leg caused pain in the knee and thigh in a second case. It is noteworthy that in the latter case, the patient had been treated with all known antirheumatic measures during a period of 5 years, before the leg-length discrepancy was noticed. Correction brought relief of pain in 3 weeks. The author points out that although the modern scientific laboratory has greatly contributed to modern diagnosis, it cannot substitute for the fundamental role played by a detailed history, a careful physical examination, and the logical clinical answer which is often derived thereby.

Critical points of failure in the therapy of cancer of the cervix

▶ Results of a study of 250 cases of recurrent carcinoma of the cervix are reported by Equinn W. Munnell, M.D., and Walter A. Bonney, Jr., M.D., in the *American Journal of Obstetrics and Gynecology,* March 1961. The patients were treated at the Columbia Presbyterian Medical Center and the Francis Delafield Hospital in New York City during the years 1940 to 1957. The fact that only 5 of these patients survived re-emphasizes the two factors essential in the management of gynecologic cancer: Early diagnosis holds the only chance of improving the cure rate, and the primary treatment is the only one offering a significant chance of cure. Survival curves show it to be of value to treat patients with central pelvic recurrence and possibly some with deep pelvic recurrence. Patients with rectal and bladder involvement had a slightly increased survival time with treatment, but no cures were obtained. With present treatment methods it is pointless to treat patients with distant spread or peripheral pelvic spread. The most common site of recurrence is in the parametria and uterosacral ligaments. It is evident that methods of primary treatment should be re-examined with respect to their effectiveness in treating these areas. The failure of clinical methods to locate recurrences accurately is emphasized. The diagnosis of recurrence can be made much earlier by the frequent use of intravenous pyelography; for example, every 6 months for the first 2½ years after completion of primary therapy.

In discussing the above report, Dr. Michael J. Jordan pointed out that the early diagnosis of recurrent carcinoma, unless it be in the vaginal vault, is almost impossible without laparotomy, and that

radical surgery is now considered curative, rather than palliative or experimental, in about 20 per cent of operable cases. However, for stage I lesions the survival rate is more than 80 per cent, and for carcinoma in situ the rate is 100 per cent; again the answer rests in greater emphasis on early detection and diagnosis. With the accuracy of present-day cytologic tests approaching 100 per cent, one can almost say unequivocally that carcinoma of the cervix is a preventable disease. Dr. Langdon Parsons added that in treating this disease, surgeons tend to concentrate too much on the lateral extension and not enough on the primary tumor. Although node dissection is important, he has found nodes to be involved surprisingly infrequently; on the other hand, the disease often spreads in the fore and aft directions much more than surgeons have realized, and only an exploratory operation discloses the true extent of the disease.

A review of seven years' experience with excision and graft replacement in 150 ruptured and unruptured aneurysms of the abdominal aorta

► The status of elective surgery for aortic aneurysms is now simplified to the point where it is an acceptable and reasonable procedure, according to a report by Paul F. Gryska, M.D., C. Gene Wheeler, M.D., and Robert R. Linton, M.D., in *The New England Journal of Medicine*, March 30, 1961. Since rupture is the natural outcome of an aortic aneurysm, the medical profession faces the challenge to discover and excise these lesions before rupture can occur. An abdominal aneurysm has an uncertain prognosis despite its size or symptoms; thus, aneurysmal disease is the *a priori* indication for surgery. Patients with asymptomatic, intact lesions have an excellent chance for successful operation; compensated but leaking aortic lesions compromise the patient's chances for survival, and patients who have suffered cardiovascular collapse from ruptured aneurysms have a negligible chance for recovery. In the 150 cases reviewed, rupture had occurred in 26, and vigorous surgical therapy saved 11 of these patients; of the 124 patients who underwent elective excision, however, 112 survived. The far lower mortality in the second group emphasizes the desirability of suggesting operation to the patient in whom an aortic aneurysm has been diagnosed.

Most significant aneurysms of the abdominal aorta are palpable as pulsatile, expansile, abdominal masses. In occasional cases of doubtful aortic enlargement, an x-ray examination of the abdomen, including a lateral view of the lumbar spine, will often reveal the abnormality. Impending rupture may be heralded by abdominal or low-back pain, but in many cases there is no warning at all. In such cases the characteristic triad of excruciating pain, hypotension, and abdominal mass should prompt early diagnosis. Aortic rupture is an obligatory emergency. X-ray and electrocardiographic studies may be dispensed with; venous cannulae should be fixed, multiple blood units requested, and the patient taken promptly to the operating room. The immediate objective is proximal aortic control, and operative efforts should be vigorous and decisive. Blood volume can then be restored before excision of the aneurysm and grafting procedure. Anesthesia is often described as "oxygen, curare, and blood."

Ventilation and circulation with closed-chest cardiac massage in man

► A study undertaken to evaluate the ventilatory efficacy of rhythmic sternal pressure is reported by Peter Safar, M.D., Torrey C. Brown, Warren J. Holtey, M.D., and Robert J. Wilder, M.D., in the *Journal of the American Medical Association*, May 20, 1961. Evaluation of tidal exchange during rhythmic sternal pressure was made in two studies, one performed on curarized adults with intact circulation and one performed on patients with cardiac arrest. It was found that this technic failed to produce any respiratory tidal exchange in 30 curarized adults lying supine with their heads unsupported, because of upper airway obstruction by the tongue. When the shoulders were elevated, sternal compression produced no respiratory tidal exchange in 16 and only minimal exchange in 14 of these subjects. In 12 medical patients with cardiac arrest, closed-chest cardiac massage produced essentially no tidal exchange even when a tracheal tube was used. Dead-space tidal volumes of air produced by sternal compression failed to reoxygenate 5 of 6 mildly hypoxic curarized adults, while positive-pressure ventilation with air produced rapid reoxygenation in all 6. Systolic arterial pressures ranged between 15 and 160 mm. Hg during closed-chest massage in 8 patients with asystole or ventricular fibrillation.

Since rhythmic sternal pressure cannot be relied on to ventilate the lungs, closed-chest cardiac massage should be preceded and accompanied by pulmonary ventilation. Many pulseless, apneic patients have recovered after ventilation alone; in any case, artificial circulation without oxygenation is futile. At the Baltimore City Hospitals the following technic of cardiac resuscitation has been adopted: One operator inflates the lungs about once every 5 seconds, and a second operator follows each inflation with 4 sternal compressions at 1-second intervals.

Ristocetin in bacterial endocarditis

► An evaluation of short-term therapy with ristocetin in 15 cases of bacterial endocarditis is reported by Monroe J. Romansky, M.D., Charles W. Foulke, M.D., Ray A. Olsson, M.D., and J. Robert Holmes, M.D., in the *Archives of Internal Medicine*, April 1961. Ristocetin is an antibiotic agent derived from the actinomycete Nocardia lurida; it is efficacious in

vitro against gram-positive micro-organisms, gram-negative diplococci, and Mycobacterium tuberculosis. Its bactericidal action is effective against antibiotic-resistant micro-organisms, and it appears to delay the emergence of resistant strains in vitro. Since it is not readily absorbed from the gastrointestinal tract, ristocetin at present is administered by the intravenous route.

Of the 15 cases reported, the causative agent was an enterococcus in 10, staphylococcus in 1, and alpha-hemolytic streptococcus in 2; no organism was isolated in the other 2 cases. Treatment consisted of the intravenous injection of about 2 gm. ristocetin per day for an average of 2 weeks. Results were good in 13 cases; complications in the other 2 cases made evaluation difficult. Side effects included skin rash, drug fever, mild phlebitis, and transient leukopenia. In an addendum to the article, the authors report that 2 additional cases have since been successfully treated, both of which involved Streptococcus viridans endocarditis.

Short-term administration of ristocetin appears to be the current treatment of choice for enterococcal endocarditis, and the good results in other types of endocarditis warrant continued study.

Repository-emulsion treatment of ragweed pollinosis

▶ Results of hay-fever treatment by the comparatively new repository injection method are reported by Lowell L. Henderson, M.D., Haddon M. Carryer, M.D., Louis E. Prickman, M.D., Giles A. Koelsche, M.D., and Gustavus A. Peters, M.D., in the *Proceedings of the Staff Meetings of The Mayo Clinic*, May 10, 1961. The report concerns 41 patients treated in the summer of 1960 with an emulsion of ragweed-pollen antigen made by the method described by Brown. The ragweed extract was emulsified with an equal volume of a mixture of arlacel and drakeol; the resulting material, which was used for all the injections, contained 16,000 protein-nitrogen units per milliliter. The results showed that over-all tolerance was satisfactory, and the reactions that occurred were not very disturbing to the patients. It was noted, however, that many of the reactions were systemic and therefore potentially dangerous. For the purposes of this study, the therapeutic results were considered secondary to the problem of reactions. It was gratifying, however, that the results were at least as good as those with the saline extracts that many of the patients had received for several years. Eleven of the patients reported that they had gotten along better than in previous years, most of the others felt that the results were as satisfactory as with previous treatment with saline extracts, 3 felt that results were poorer, and 2 thought that they had equally poor relief with either type of treatment. The mode of therapy was enthusiastically received, only 1 of the 41 patients indicating a preference for the multiple-injection saline treatment. Analysis of reactions indicated that these should not be considered a deterrent to further use of repository treatment and expansion of its application. The authors planned, for the 1961 season, to adjust the concentration of the emulsion to 10,000 protein-nitrogen units per milliliter, and to give a small injection early in May and a larger dose in mid-June. Patients with undue reactions to the first injection would probably receive a total of 3 graduated doses.

Subacute bacterial endocarditis

▶ Clinical and laboratory observations in 27 consecutive cases of bacterial endocarditis treated with oral penicillin V are reported by E. L. Quinn, M.D., and J. M. Colville, M.D., in *The New England Journal of Medicine*, April 27, 1961. The diagnosis was confirmed by two to eleven positive blood cultures in each case. Streptococcus viridans strains were isolated from 26 patients, and a microaerophilic streptococcus from 1 patient. Seventeen of the patients were male, 10 female; ages ranged from 7 to 75 years. Symptoms had been present for 2 weeks to 1 year before hospitalization. Two of the patients apparently represented cases of reinfection, because each had been successfully treated for the same condition several years before. Pre-existing heart disease was a constant feature.

It was found that 1,200 mg. of penicillin V administered orally every 4 hours produced serum concentrations of penicillin comparable to those achieved with 600,000 units of aqueous procaine penicillin G given intramuscularly every 6 hours. Oral administration of 7.2 gm. of penicillin per 24 hours for prolonged periods was well tolerated. One of the 27 patients failed to absorb adequate amounts from the gastrointestinal tract, and bacteriologic relapse occurred in this case. Therefore, oral penicillin therapy requires monitoring of serum concentration or serum inhibitory activity in each patient. With this limitation, the oral route may be substituted for the parenteral in the various successful therapeutic regimens for subacute bacterial endocarditis. The correlation of serum inhibitory activity with outcome of therapy indicated that sixteen times the concentration necessary to inhibit the infecting organism in vitro should be continuously maintained during treatment of endocarditis, with peaks considerably higher than this level.

Results of treatment in the 27 cases showed definite bacteriologic cure in 21, probable cure in 3, and failure in 3. In the last 3 cases, however, 2 of the patients died of an associated condition before the planned therapy was completed.

BOOK REVIEWS

► *Books for review which were received during the period from August 5 to September 5 are listed on pages A-196 and A-197. Reviews of these books will be published as space permits.*

► THE RELUCTANT SURGEON. A Biography of John Hunter. By John Kobler. Cloth. Pp. 359. Price $4.95. Doubleday & Company, Inc., Garden City, New York 20, 1960.

The Reluctant Surgeon is not only a biography of John Hunter, but a valuable contribution to the history of medicine. It should be in the libraries of all those interested in the background of medicine and its ancillary professions. It is highly recommended for students.

Biologist, researcher, comparative and human anatomist, surgeon, and teacher are some of the descriptive terms that might be used in referring to this man of science. Through his efforts the understanding of man in health and disease has benefited. This rugged individualist from Scotland was in constant pursuit of knowledge, through which he gained understanding and wisdom and for which he paid dearly.

The extent of Hunter's influence on American medical education will never be known, but the names and accomplishments of some who were his pupils are conspicuous in the annals of medical teaching and practice in this country.

As is often true of those who have the will and ability to investigate and experiment, Hunter's enemies were numerous and vicious. He was the victim of plagiarism, both before and after his death, and professional jealousy and ridicule. It was during a staff meeting, called to oppose his practices and policies, that he died. He was his own guinea pig and thus his own observer—a bold experimenter upon his own vitality. Long after his death the good that he did continues to live and serve. As one reads this work he can not fail to realize that John Hunter used, to the best of his ability, the years with which he was entrusted.

Examples of Hunter's contributions to the world of learning and the fields of medicine and surgery are numerous. One that demonstrates clearly his ability to combine keen observation with understanding resulted in successful operations upon the vascular system. From his studies of the blood vessels, "John Hunter deduced the entire principle of collateral circulation." This, combined with his knowledge "gained through earlier investigations concerning the absorptive power of the lymphatics," enabled him to operate on a patient having an aneurysm of the popliteal artery. "John's operation, still performed much as he conceived it, continued to obviate amputations and save life."

Among his patients were numbered those of royalty and those of most humble heritage and station; the intellectually honest and the intellectually destitute; the soldier and the civilian. Benjamin Franklin sought his wise counsel. These he disciplined wisely, being himself a master of self-discipline.

So vivid is the description throughout the book that the reader ventures with John Hunter into historic days and experiences with him the labors and achievements of an earlier time. Within the shadows of the graveyard he watches quietly as the grave robbers or resurrectionists work to provide anatomic subjects, and he comes to appreciate more fully the laws designed to provide for this phase of medical education. He meets many of Hunter's pupils and makes rounds with him in St. George's Hospital, and on occasion rides with him in the big black carriage as house calls are made.

In so doing, the reader understands how much the labors and efforts of one man of the past have contributed to the present. Upon completing his reading one will in all probability begin a critical self-appraisal.

ANGUS G. CATHIE, D.O., M.Sc. (ANAT.)

► ANESTHESIA AND THE LAW. By Carl Erwin Wasmuth, M.D., LL.B., Staff Anesthesiologist, Department of Anesthesiology, Cleveland Clinic Foundation and the Frank E. Bunts Educational Institute, Cleveland, Ohio; Assistant Professor in Legal Medicine, Director of the Department of Medical-Legal Affairs, Cleveland-Marshall Law School; Member of the Ohio Bar, Cleveland, Ohio. Cloth. Pp. 105, with illustrations. Price $5.00. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

Dr. Wasmuth is well qualified to write on this timely topic. As a physician-lawyer, he endeavors to point the way toward a harmonious relationship between surgeon, anesthesiologist, and patient,

which will also safeguard the rights of each under law.

Many chapters of the book have been published previously in various medical journals and are now compiled in an orderly monograph. Actual cases are included to illustrate points of law as it pertains to the field of anesthesia.

An important point stressed repeatedly is a rather new facet of the physician-patient relationship: Although the surgeon must still assume ultimate responsibility for the over-all conduct and result of a surgical procedure, the anesthesiologist is directly responsible to the patient for certain aspects of his professional acts. This responsibility is recognized by law and the anesthesiologist cannot evade it.

The author spells out the duties of the anesthesiologist to the patient as they relate to the preanesthetic visit, emphasizing a concept which this reviewer has utilized for years: The patient should be made acquainted with the type of anesthetic technic to be used without being given too many details.

It was a bit surprising that nothing was said about the patient who has been given narcotics for pain by the order of a surgeon, resident, or intern, and then a decision has been made to perform an operation of a nonemergency nature. In such a case the anesthesiologist has received no consent, because at least I would feel that the patient in such a state would not be mentally competent to give it.

This monograph is a "must" for the bookshelf of every anesthesiologist.

A. A. Golden, D.O.

▶ Ciba Foundation Symposium. HAEMOPOIESIS. Cell Production and its Regulation. Editors for the Ciba Foundation: G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P.; and Maeve O'Connor, B.A. Cloth. Pp. 490, with illustrations. Price $11.00. Little, Brown and Company, 34 Beacon Street, Boston 6, 1960.

This book contains a series of papers presented at a conference sponsored by the Ciba Foundation, held in February 1960. The participants were outstanding workers in the field of hematology, primarily reporting their studies on cellular kinetics. Leukopoiesis and erythropoiesis were discussed with a great deal of emphasis on the problem of the hematopoietic stem cell. The participants described many of their current and past experimental studies and the interpretations placed upon their results. After each paper, discussion was entertained, with critical analysis of the paper and findings by the other participants.

Much of the reported material is of an experimental nature and has not been conclusively established. For this reason, persons primarily involved with clinical hematology may not be too interested in these papers; however, the discussions are often illuminating and attempt in many instances to correlate the experimental with clinical patterns. This is particularly true in the papers on erythropoiesis. The papers presented by Drs. Craddock and L. O. Jacobson are particularly interesting in this respect.

The book is well printed; the format is good. An author and topic index is included. This book is recommended to persons interested in the basic research in hematopoiesis, particularly those interested in tissue culture and isotopic tagging of cells.

Sidney J. Katz, D.O.

▶ AN ATLAS OF PAIN PATTERNS. Sites and Behavior of Pain in Certain Common Diseases of the Upper Abdomen. By Lucian A. Smith, M.D., M.S. (Med.); Norman A. Christensen, M.D., M.S. (Med.); Norbert O. Hanson, M.D.; Donald E. Ralston, M.D., M.S. (Med.); Richard W. P. Achor, M.D., M.S. (Med.); Kenneth G. Berge, M.D., M.S. (Med.); George W. Morrow, Jr., M.D., M.S. (Med.); and Arthur H. Bulbulian, M.S., D.D.S., F.A.C.D. Mayo Clinic and Mayo Foundation, Rochester, Minnesota. Cloth. Pp. 54, with illustrations. Price $12.50. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

Tucked under the dome of the diaphragm is an assortment of viscera, any one of which may pose a diagnostic problem. This slender atlas deals with four or five of them, notably the stomach, including hiatus hernia; the duodenum; the gallbladder and ducts; and the pancreas. With an economy of words and an abundance of colorful illustrations, the authors offer in 50 pages an interpretation of the viscerosomatic pain process as an early visceral lesion grows and spreads to involve contiguous structures.

Apparently the viscerosomatic pain reflex is not the simple one-two thing we have been led to believe. The authors distinguish between two general types: a symmetrical midline vague "visceral" pain, the effect of impulses carried centralward via afferent splanchnic nerves; and an asymmetrical, often unilateral, more clearly defined "somatic" pain, the result of impulses carried from the parietal peritoneum (and other structures) by afferent cerebrospinal nerves. Both visceral and somatic pain are, of course, referred to the body wall, and there may be various gradations or blending of the two. The authors emphasize, however, especially in the diagrams, the "shift" in the pain pattern which takes place when a visceral (usually inflammatory) lesion extends, by whatever means, to involve the cerebrospinally innervated tissues. Interestingly, the authors attribute the faculty of visceral or splanchnic pain reception to pacinian corpuscles as well as to the classic free nerve ends.

Simple visceral pain, if severe enough, may also manifest for a brief period a somatic or cerebrospinal type of pain, as a result of "spillover" to adjacent somatic afferent reverberating circuits in the spinal cord.

The 34 pages of colored diagrams of pain patterns and lifelike illustrations of organs with the specific sites involved, together with the terse descriptions, will be of real value when one needs to

arrive at a working diagnosis quickly. However, of more lasting diagnostic value, I believe, is the dynamic concept of the progress and shift of the pain picture as a local lesion deepens and spreads.

H. G. GRAINGER, D.O.

► SYNOPSIS OF ORAL PATHOLOGY. By S. N. Bhaskar, B.D.S., D.D.S., M.S., Ph.D., Major, United States Army Dental Corps; Chief, Oral Tumors Branch, Armed Forces Institute of Pathology, Washington, D. C.; Assistant Professor of Pathology, Georgetown University School of Dentistry, Washington, D. C.; Lecturer, Army Medical Service Graduate School, Walter Reed Army Medical Center, Washington, D. C., Consultant in Oral Pathology to the Assistant Surgeon General and Chief of the Dental Corps, United States Army; Member, Dental Research Advisory Committee to the Medical Research and Development Division, Department of the Army; formerly Associate Professor of Pathology, University of Illinois College of Dentistry, Chicago, Ill. Cloth. Pp. 502, with illustrations. Price $9.75. The C. V. Mosby Company, 3207 Washington Boulevard, St. Louis 3, 1961.

This is a pocket-sized textbook. It is divided into two parts: an outline of the pertinent information to aid in diagnosis; and a more detailed explanation of each disease, along with explanatory photographs.

The first section is presented under the following headings: (1) white lesions of the oral mucous membrane, (2) vesicular lesions of the oral mucosa, (3) ulcerations of the oral mucosa, (4) pigmented lesions of the oral mucosa, (5) firm nonhemorrhagic growths of soft oral tissues, (6) hemorrhagic or easily bleeding soft tissue growths of the oral cavity, (7) submerged or partially submerged compressible lesions of the oral mucosa, (8) papillary or cauliflowerlike lesions of the soft tissues, (9) radiolucent lesions of the jaws, (10) radiopaque lesions of the jaws, (11) radiopaque and radiolucent lesions of the jaws, and (12) swellings of the salivary glands. By the physical characteristics given in the first section, one can then refer to the second section for further details. There is very thorough coverage for a book of this size.

This book is recommended for hospital and medical libraries. Nose and throat specialists would find it a handy reference, as would the dermatologist.

A. P. ULBRICH, D.O.

► THE PHYSIOLOGY OF EMOTIONS. Report of the Third Annual Symposium of the Kaiser Foundation Hospitals in Northern California, San Francisco. Edited by Alexander Simon, M.D., Professor and Chairman, Department of Psychiatry, University of California School of Medicine; Medical Director, Langley Porter Institute, San Francisco; Charles C. Herbert, M.D., Chief of Medicine and Director of Medical Education, Kaiser Foundation Hospital, San Francisco; and Ruth Straus, Department of Publication, Kaiser Foundation Hospitals, Oakland, California. Cloth. Pp. 248, with illustrations. Price $8.50. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

This book is a collection of papers, representing the observations of eminent teachers and researchers, delivered at the Third Annual Symposium sponsored by the Kaiser Foundation Hospitals in San Francisco on October 9 and 10, 1959. The participants were Roy Grinker, H. W. Magoun, Hudson Hoagland, William Ganong, Peter Forsham, Seymour Kety, Alan Goldfien, Joel Elkes, R. M. Featherstone, Frank Beach, Ralph Gerard, Karl Pribham, David McK. Rioch, Charles Herbert, Maurice Goldstein, and Edwin Weinstein. There are eleven papers in eight chapters.

Dr. Grinker lays the basis for the symposium in his paper on the physiology of emotions. This is an excellent recapitulation of the modern concepts. For example, he defines anxiety as a feeling state which is so unendurable to man that it evokes defensive maneuvers which in themselves are symptomatic, and their clusters or syndromes comprise the whole spectrum of psychiatric and psychosomatic disorders.

> Anxiety may be evoked by threatening internal somatic processes, by psychological stimuli meaningful to a particular subject, or by difficulties in the social adjustment.... The reduction or removal of defenses is associated with the recrudescence of anxiety which often further disturbs therapy, if it is permitted to become intense.

However, Grinker calls attention to the fact that despite the span of his essay, it but emphasizes the mammoth ignorance that characterizes this field today.

Subsequent presentations of the symposium elaborate on points mentioned by Dr. Grinker. For example, H. W. Magoun goes into detail on the neurophysiologic correlates of emotions; Hudson Hoagland writes about some endocrine stress responses in man; and Seymour Kety describes a study on biochemical influences, which leads to J. Elkes' discussion of drugs affecting behavior. Frank Beach presents work from his studies on sex differences and physiologic correlates of mating behavior of animals. As a "dessert" to the "meal" this symposium provides, Ralph Gerard presents the problems of the neurologist in his attempt to relate anatomy to the existence of neurosis, and there is a classical panel discussion on the psychophysiology of death, with David McK. Rioch as moderator.

For the student this study is an epitomization of current knowledge of emotion from the standpoint of the organicist. Even the psychobiologist will find evidence here that will be of value in his understanding.

THOMAS J. MEYERS, PH.D., D.O.

► Ciba Foundation Colloquia on Endocrinology. Volume 13. HUMAN PITUITARY HORMONES. Edited by G. E. W. Wolstenholme, O.B.E., M.A., M.B., M.R.C.P.; and Cecilia M. O'Connor, B.Sc. Cloth. Pp. 336, with illustrations Price $9.50. Little, Brown & Company, 34 Beacon Street, Boston, 1960.

This is the latest in a long series of colloquia on endocrinology. In the familiar format of these pub-

lications, such topics are discussed as the human growth hormone in relation to immunologic studies, to the mobilization of fatty acids, to metabolism, to urinary calcium excretion, and to aldosterone secretion. Tests are described for detection of pituitary-related substances by laboratory examination of urine and blood. The anatomy and physiology of the pituitary are discussed, both as separate topics and as they relate to other phases of the subject at hand.

▶ SURGERY OF THE AORTA AND ITS BRANCHES. By James D. Hardy, M.S. (Chem.), M.D., F.A.C.S., Professor and Chairman, Department of Surgery, University of Mississippi Medical Center, and Surgeon-in-Chief to the University Hospital; Chief Surgical Consultant to the Veterans Administration Hospital, Jackson, Mississippi. Cloth. Pp. 386, with illustrations. Price $6.50. J. B. Lippincott Company, East Washington Square, Philadelphia 5, 1960.

The seven chapters of this monograph were originally published as a series of articles in the *American Practitioner and Digest of Treatment*. They describe the indications and general principles of operations on the aorta, without giving great detail. Some of the clinical conditions where these operations might be of help are: "strokes," ischemia in various locations, correctible occlusion of the mesenteric artery, aneurysms, arterial embolism, and arterial trauma. The essays in this book deal with all these matters, and with some other principles as well.

Although this is not a textbook, enough information is given to orient the beginner in the field. Bibliographies are extensive enough to lead on to detailed study of almost any phase.

▶ INTRA-OSSEOUS VENOGRAPHY. By Robert A. Schobinger, M.D., Clinical Instructor in Surgery, Albert Einstein College of Medicine, New York, N.Y.; Section Chief, Surgical Service, Veterans Administration Hospital, Bronx, N.Y., formerly Associate Cancer Research Surgeon, Roswell Park Memorial Institute, Buffalo, N.Y. Cloth. Pp. 243, with illustrations. Price $14.50. Grune & Stratton, 381 Fourth Avenue, New York 16, 1960.

Intraosseous venography is considered by the author of this book to be an alternate procedure when the conventional intravenous route is either unavailable or undesirable, or a supplementary procedure for more complete surveys than can be obtained by other means, or the only means of demonstrating certain areas of the vascular system. Thus, it might be used in patients with thrombophlebitis, thrombotic venous occlusion, obesity, or edema. It could demonstrate pathologic conditions of the lungs, mediastinum, pelvis, or extremities, or portal hypertension. It is the only method known so far for study of the hemodynamics of the azygos system, vertebral venous plexus, intercostal veins, and internal mammary veins. It also has the possibility of opacifying the medullary cavity of the bone itself.

The author has been experimenting with this procedure for some time now, and has written this book from his experience with about 1,200 examinations. He gives information on what to do and what to expect for a number of different sites of injection; he regularly uses about fifteen such sites. A large proportion of the book is pictorial, including photographs of points in injection technic, reproductions of roentgenograms, and line drawings to help with the interpretation of the roentgenograms. Detailed information is given on positioning the patient for each approach, on normal anatomy of the area, and on clinical applications expected from study of the area.

Although the procedure is not yet widely accepted or even finally perfected, this book will surely be of interest to radiologists with an eye toward progress.

▶ MODERN OCCUPATIONAL MEDICINE. Edited by A. J. Fleming, M.Sc., M.D., F.A.C.P., Medical Director, E. I. du Pont de Nemours & Company; and C. A. D'Alonzo, M.D., F.A.C.P., Assistant Medical Director, Medical Division, E. I. du Pont de Nemours & Company. Ed. 2. Cloth. Pp. 587, with illustrations. Price $12.00. Lea & Febiger, Washington Square, Philadelphia 6, 1960.

A new chapter on chest diseases has been added to the second edition of this text. There is also a new section on the types of emotional or mental illness commonly seen in an industrial environment, with suggestions for dealing with them within the limitations placed upon the industrial physician. Other parts have been revised as well, including the discussion on safety education. A new chapter on biostatistics has been added, to give help in constructing studies in the field of occupational medicine. As in the previous edition, information is designed to be useful to both full-time and part-time industrial physicians, as well as paramedical personnel in the field.

▶ A PRIMER OF RADIATION PROTECTION. By R. J. Schulz, Assistant Professor of Radiology (Physics), Albert Einstein College of Medicine. Paper. Pp. 40, with illustrations. No charge. Ansco, A Division of General Aniline & Film Corporation, Binghamton, New York.

This small manual has been produced with an aim of presenting concise information on the physical aspects of radiation protection to those who work in the field. It is offered without charge to physicians and technicians, upon request to the publisher.

Information supplied is very basic. Topics covered include radiation units, maximum permissible dose, absorption processes and radiation shields, determination of shielding requirements (for both x-ray and teletherapy), radium and radioisotopes, and radiation detectors. The booklet is attractively illustrated with charts and photographs, and it includes a small bibliography on each topic it covers.

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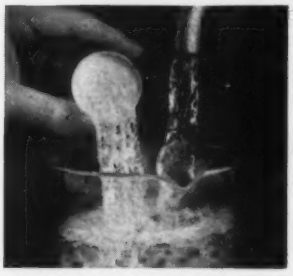

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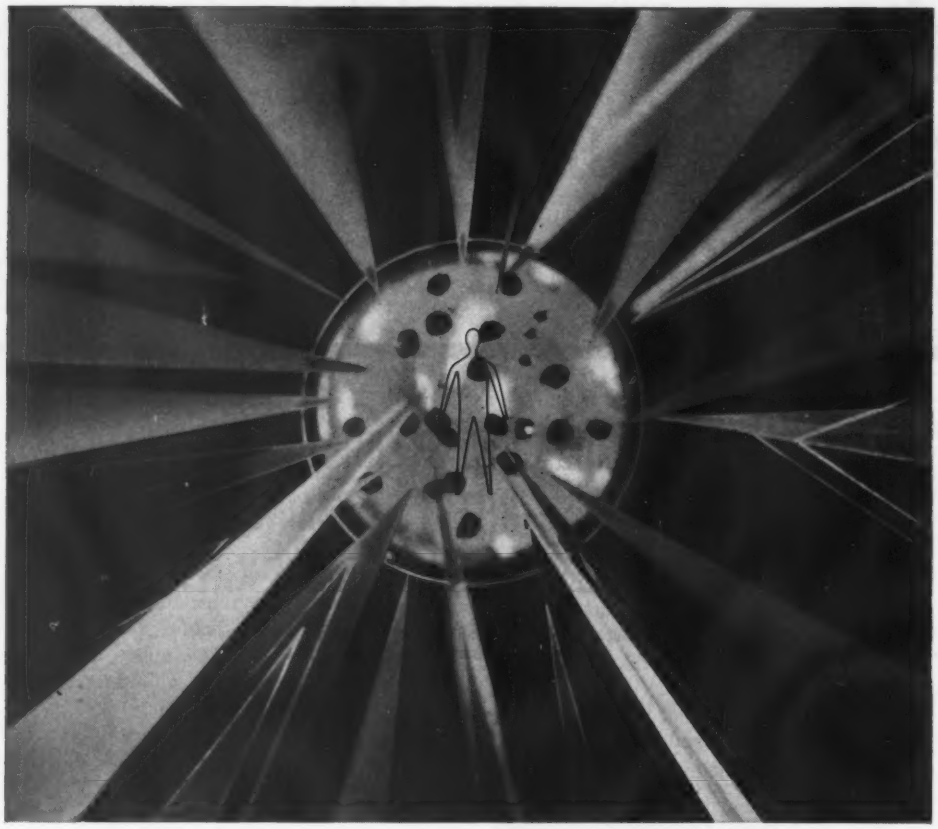
* Engelhard, W.E., Weidman, J.G., and Jolliff, C.R.: Evaluation of Warexin as a potential cold sterilizing agent, Surgery, 49: 651-656, 1961.



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Conventions and meetings

Academy of Applied Osteopathy, convention program and 25th anniversary meeting, Las Vegas, Nev., January 18-19. Acting Program Chairman, Margaret H. Raffa, 5009 Central Ave., Tampa 3, Fla. Secretary, Margaret W. Barnes, P.O. Bin 1050, Carmel, Calif.

American College of Osteopathic Internists, annual meeting, Hotel Mark Hopkins, San Francisco, October 5-7. Executive Secretary, Glennard E. Lahrson, 400 40th St., Oakland 9, Calif.

American College of Osteopathic Obstetricians and Gynecologists and the American College of Osteopathic Pediatricians, annual meeting, Americana Hotel, Bal Harbour, Fla., February 19-22. A.C.O.O.G. Program Chairman, John C. Dickinson, Jr., 3272 West Rd., Trenton, Mich. Secretary, Arthur A. Speir, Box 66, Merrill, Mich. A.C.O.P. Program Chairman, Arthur Snyder, 386 N. E. 167th St., North Miami Beach, Fla. Secretary, Martyn E. Richardson, 9553 Lackland Rd., St. Louis 14.

American College of Osteopathic Surgeons, annual clinical assembly, Denver Hilton Hotel, Denver, Colo., October 29-November 2. Executive Secretary, Charles L. Ballinger, Box 40, Coral Gables, Fla.

American Osteopathic Association, Sixty-Sixth Annual Convention, Las Vegas, Nev., January 15-18. Program Chairman, W. Clemens Andreen, Andreen Clinic, 1475 Ford Ave., Wyandotte, Mich.

American Osteopathic College of Proctology, refresher course, May 7-8, **annual clinical assembly,** May 9-11, Eden Roc Hotel, Miami Beach, Fla. Program Chairman, Edmund A. Bowman, 319 Fisher Rd., Grosse Pointe 30, Mich. Secretary, Earle F. Waters, 925 E. South Temple St., Salt Lake City 2, Utah.

Canadian Osteopathic Association, annual meeting, Lord Simcoe Hotel, Toronto, October 5-7. Program Chairman, Norman W. Routledge, 15 Ursuline Ave., Chatham, Ont. Secretary, Miss Joyce S. Currie, 609 Medical Arts Bldg., Montreal 25, Quebec.

District of Columbia, see **Maryland.**

Eastern States Osteopathic Society of Proctology, annual meeting, Marriott Motor Hotel, Washington, D. C., November 4-5. Program Chairman, Felix D. Swope, 1028 Connecticut Ave., N. W., Washington 6, D. C. Secretary, LeRoy W. Lovelidge, Jr., 201 E. Orange St., Lancaster, Pa.

Florida, annual meeting, Carillon Hotel, Miami Beach, October 2-4. Address communications to 5009 Central Ave., Tampa 3.

Hawaii, annual meeting in combination with Western States Osteopathic Society of Proctology, Princess Kaiulani Hotel, Honolulu, October 9-12. Program Chairman, Alan R. Becker, 1739 Kalakaua Ave., Honolulu 14. Secretary, Joseph M. Thomas, 1541 S. Beretania St., Honolulu 14.

Idaho, see **Washington.**

Indiana, annual meeting, Hotel Elkhart, Elkhart, May 19-22. Secretary, Arabelle Baker Wolf, 4840 N. Michigan Rd., Indianapolis 8.

Louisiana, annual meeting, Hotel Monteleone, New Orleans, October 12-14. Program Chairman, Carl E. Warden, 827 Hodges St., Lake Charles. Secretary, V. L. Wharton, 406-07 Weber Bldg., Lake Charles.

Maryland, District of Columbia, and Virginia, annual meeting, Carvel Hall, Annapolis, Md., October 7-8. Program Chairman, E. R. MacDonald, 1318 West St., Annapolis, Md. Secretary, Joseph

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1. Beil, A. R. and Brevetti, R. E.: Management of constipation during the puerperium, New York State J. Med. 60:2706-2707, September 1, 1960.

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Maine, annual meeting, Hotel Samoset, Rockland, June 21-23. Executive Director, Mr. George R. Petty, Monmouth.

Michigan, annual meeting, Pantlind Hotel and Civic Auditorium, Grand Rapids, October 2-4. Program Chairman, George G. O'Malley, P.O. Box 188, Galien. Executive Secretary, Mr. Floyde E. Brooker, 33100 Freedom Rd., Farmington.

Missouri, annual meeting, Sheraton-Jefferson Hotel, St. Louis, October 3-5. Program Chairman, Harry S. Still, Still-Hildreth Osteopathic Sanatorium, Macon. Executive Secretary, Mr. Paul D. Adams, 325 E. McCarty St., Jefferson City.

National Osteopathic Child Health Conference, Municipal Auditorium, Kansas City, Mo., April 16-18. Executive Secretary, Stan J. Sulkowski, 409 Scarritt Arcade, 819 Walnut St., Kansas City 6.

New Jersey, annual meeting, Traymore Hotel, Atlantic City, March 9-11. Executive Secretary, Mr. R. P. Chapman, 1212 Stuyvesant Ave., Trenton 8.

New Mexico, annual meeting, Western Skies Hotel, Albuquerque, April 12-15. Program Chairman, George C. Widney, Jr., 1125 Kent Ave., N. W., Albuquerque. Executive Secretary, Mr. L. Thomas Christison, P.O. Box 696, Albuquerque.

New York, annual meeting, Sheraton Atlantic Hotel, New York City, October 13-14. Program Chairman, George F. Johnson, 353 77th St., Brooklyn 9. Executive Secretary, C. Fred Peckham, 38 E. Bridge St., Oswego.

North Carolina, annual meeting and refresher course, Battery Park Hotel, Asheville, October 26-28. Program Chairman, Joseph H. Huff, Box 1177, Burlington. Secretary, Walter C. Eldrett, 310 S. Main St., Hendersonville.

Oregon, see **Washington.**

Osteopathic College of Ophthalmology, and Otorhinolaryngology, annual meeting, Americana Hotel, Bal Harbour, Fla., September 25-27. Executive Secretary, A. A. Martin, Box 222, Kirksville, Mo.

Pennsylvania, midyear refresher course, Hotel Hershey, Hershey, October 13-15. **Annual meeting,** Penn Sheraton Hotel, Pittsburgh, May 17-19. Executive Director, Mr. Thomas M. Fogarty, 1941 Market St., Harrisburg.

South Dakota, annual meeting, Rapid City, May 6-7. Program Chairman, L. A. Deitrick, Bison. Secretary, Earl W. Hewlett, 417 W. 27th St., Sioux Falls.

Tennessee, annual meeting, Paris Landing Inn, Buchanan, May 6-9. Secretary, Paul Grayson Smith, Box 63, Pikeville.

Vermont, annual meeting, Mt. Snow, Dover, September 27-28. Program Chairman, Mason B. Barney, Box 336, Manchester Center. Clerk, Marian N. Rice, 8 Court St., Windsor.

Virginia, see **Maryland.**

Washington, Oregon, and Northern Idaho, annual meeting, Olympic Hotel, Seattle, Wash., June 7-9. Secretary, Lon A. Hoover, 1219 Sixth Ave., Tacoma 5.

Western States Osteopathic Society of Proctology, annual meeting, in combination with Hawaii Association of Osteopathic Physicians and Surgeons, Princess Kaiulani Hotel, Honolulu, October 9-12. Program Chairman, George W. Diver, Box 180, Elsa, Texas. Secretary, Marcus S. Gerlach, 2015 State St., Santa Barbara, Calif.

West Virginia, midyear meeting, Greenbrier Hotel, White Sulphur Springs, October 15-17. **Annual meeting,** Daniel Boone Hotel, Charleston, May 13-15. Executive Secretary, Mr. Gilbert D. Brooks, 313 Berman Bldg., Charleston 1.

Ontario, annual meeting, Park Hotel, Niagara Falls, May 7-9. Program Chairman, A. Reid Johnston, 1298 King St., E., Hamilton. Secretary, William K. Church, 85 Neywash St., Orillia.

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This distinction appears to be no longer necessary, however, since glucosamine, a highly acceptable excipient for oral antibiotics, now is being incorporated uniformly in all such forms, thereby simplifying nomenclature and your prescription writing.

Accordingly, and effective immediately, our oral broad-spectrum drug forms, incorporating glucosamine, will be offered simply as Terramycin, Signemycin and Tetracyn, without the "COSA" prefix. To make clear just which forms are affected, please refer to the brief tabulation on the opposite page of our oral broad-spectrum dosage forms both before and after this change. We are also requesting our representative to call on you at an early date to answer any questions that may arise.

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Cosa-Tetrabon Pediatric Drops	**Tetracyn Pediatric Drops**

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Alaska basic science examinations given on request. Address R. Harrison Leer, M.D., secretary, Board of Examiners, Alaska Office Bldg., Juneau.

Arizona Those interested in professional examinations should contact Russell Peterson, D.O., secretary, Osteopathic Board of Registration and Examination in Medicine and Surgery, 2747 E. McDowell Rd., Phoenix 22.

Basic science examinations December 19 at the University of Arizona, Tucson. Address Millard G. Seeley, Ph.D., secretary, Board of Examiners in the Basic Sciences, University of Arizona, Tucson.

Arkansas examinations given on request. Address E. M. Sparling, D.O., secretary, Board of Osteopathic Examiners, 222 Thompson Bldg., Hot Springs National Park.

Basic science examinations October 19-20. Address Mr. A. W. Ford, commissioner, Board of Education, Little Rock.

Colorado examinations in December. Address Miss Mary M. McConnell, secretary, Board of Medical Examiners, 715 Republic Bldg., Denver 2.

Basic science examinations in December. Address Esther B. Starks, D.O., secretary, Basic Science Board, 1459 Ogden St., Denver 18.

Connecticut examinations November 14-15. Applications must be filed in advance. Address Frank Poglitsch, D.O., secretary, Osteopathic Examining Board, 300 Main St., New Britain.

Basic science examinations October 14. Address Miss M. G. Reynolds, executive assistant, Board of Healing Arts, 110 Whitney Ave., New Haven 10.

District of Columbia examinations December 11 and 12. Address Mr. Paul Foley, deputy director, Department of Occupations and Professions, 1740 Massachusetts Ave., N. W., Washington 6, D. C.

Basic science examinations in October. Address Mr. Foley.

Florida examinations in December. Applications must be filed in advance. Address Thomas F. Sheffer, D.O., secretary, Board of Osteopathic Medical Examiners. Las Olas Hospital, 1516 E. Las Olas Hospital, Ft. Lauderdale.

Hawaii For information on examination dates write to Richard Y. Kodama, D.O., secretary, Board of Osteopathic Examiners, 826 Keeaumoku St., Honolulu 14.

Idaho examinations November 9 at Boise. Address Mrs. Nan K. Wood, director, Occupational License Bureau, Department of Law Enforcement, State House, Boise.

Iowa basic science examinations October 10 at the Capitol Building, Des Moines. Address Elmer W. Hertel, Ph.D., secretary, Board of Basic Science Examiners, Wartburg College, Waverly.

Kansas basic science examinations in November. Address Dr. L. C. Heckert, secretary, Board of Basic Science Examiners, Kansas State College, Pittsburg.

Kentucky examinations in December. Address Mrs. Ray Wunderlich, director, Medical Licensure and Registration, Board of Health, 275 E. Main St., Frankfort.

Maine examinations November 14-15. Address George Frederick Noel, D.O., secretary, Board of Osteopathic Examination and Registration, 20 Monument Sq., Dover-Foxcraft.

Maryland examinations in October. Applications must be filed 10 days in advance. Address Christopher L. Ginn, D.O., secretary, Board of Osteopathic Examiners, 19 W. Mulberry St., Baltimore 1.

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1. The Effectiveness of *d*-Propoxyphene Hydrochloride and Codeine Phosphate as Determined by Two Methods of Clinical Testing for Relief of Chronic Pain, J. Pharmacol. & Exper. Therap., *118*:280, 1956. **2.** Codeine Phosphate, Propoxyphene Hydrochloride, and Placebo, J.A.M.A., *164*:966, 1957. **3.** A Comparison of the Analgesic Efficacy of d-Propoxyphene (Darvon) and Meperidine (Demerol), J. Chron. Dis., *8*:645, 1958. **4.** Dental Therapeutics: I. A Preliminary Report on Dextro Propoxyphene Hydrochloride, J. California Dent. A. & Nevada Dent. Soc., *34*:479, 1958. **5.** A Double-Blind Method for Evaluating Analgesics in Man, Am. J. M. Sc., *235*:297, 1958. **6.** Non-Narcotic Analgesia to Simplify Postpartum Care, Obst. & Gynec., *13*:22, 1959. **7.** A Comparison of the Effectiveness of Codeine Phosphate and Dextro-Propoxyphene Hydrochloride, Pennsylvania M. J., *62*:186, 1959. **8.** Dextro-Propoxyphene Hydrochloride plus Acetylsalicylic Acid in the Control of Painful Rheumatic Disorder, M. Times, *87*:1637, 1959. **9.** An Evaluation of Dextro Propoxyphene Hydrochloride in the Treatment of Headache, Univ. Michigan M. Bull., *25*:74, 1959. **10.** Clinical Comparison of the Analgesic Effects of Dextro-Propoxyphene and Other Analgesics, Antibiotic Med. & Clin. Therapy, *6*:362, 1959. **11.** Evaluation of a New Analgesic Agent; d-Propoxyphene Hydrochloride (Darvon®) in Preanesthetic and Postanesthetic Management, Anesth. & Analg., *38*:50, 1959. **12.** Pain Control with a Mixture Containing Dextro Propoxyphene Hydrochloride, a Mixture Containing Codeine Phosphate and a Placebo, J. Oral Surg., *17*:14, 1959. **13.** Clinical Analgesic Study: A Single-Blind Comparison of Codeine Phosphate and Dextro Propoxyphene Hydrochloride, Oral Surg., *12*:1203, 1959. **14.** Comparison of Efficacy of Three Test Analgesic Preparations, J. Florida Dent. Soc., *30*:20, 1959. **15.** Clinical Analgesic Study: II. J. Alabama Dent. A., *44*:4, 1960. **16.** An Analysis of the Analgesic Effect of Dextro Propoxyphene Hydrochloride, Phenaglycodol, and Aspirin Combination (Darvo-Tran), Antibiotic Med. & Clin. Therapy, *6*:512, 1959. **17.** The Clinical Evaluation of Darvo-Tran in Dental Practice, J. District of Columbia Dent. Soc., *34*:11, 1959. **18.** Pain Control in Periodontal Surgery, J. Periodont., *31*:56, 1960. **19.** Darvo-Tran in Analgesic Therapy: Its Clinical Evaluation in Muscular Skeletal Syndromes, Harlem Hosp. Bull., *1*:117, 1960. **20.** The Use of Darvon Compound after Anorectal Surgery, Am. J. Surg., *99*:316, 1960. **21.** Analgesic Therapy. II. Orally Administered Analgesics in the Control of Pain Associated with Malignant Neoplasms, Antibiotic Med. & Clin. Therapy, *7*:433, 1960. **22.** Effect of Dextro Propoxyphene, Meperidine, and Codeine on Postoperative Pain, J.A.M.A., *172*:1372, 1960. **23.** Analgesic Tests in Oral Surgical Practice, J. Indiana Dent. A., *39*:338, 1960. **24.** Dextro Propoxyphene, a New Non-Narcotic Analgesic, J. Indiana Dent. A., *40*:90 (March), 1961. **25.** A Comparison of Three Preparations on Pain Control, J. South. California Dent. A., *27*:352, 1959. **26.** Dextro Propoxyphene versus Meperidine: An Evaluation of Analgesic Activity of These Hydrochlorides in Postoperative Patients, Arch. Surg., *82*:429 (March), 1961. **27.** The Clinical Evaluation of an Analgesic-Tranquilizer Compound, Illinois Dent. J., *29*:11, 1960. **28.** A New Non-Narcotic Analgesic in the Relief of Dental Pain, Texas Dent. J., *77*:4, 1959.

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tions in October. Address Mrs. Anne Baker, secretary, Board of Examiners in the Basic Sciences, 116 Mason Bldg., Lansing.

Minnesota basic science examinations October 3 at the University of Minnesota, Minneapolis. Address Raymond N. Bieter, M.D., secretary, Board of Examiners in the Basic Sciences, 105 Millard Hall, University of Minnesota, Minneapolis 14.

Nebraska examinations given on request. Address Mr. R. K. Kirkman, director, Bureau of Examining Boards, Department of Health, State Capitol Bldg., Lincoln 9.

Basic science examinations October 3-4. Address Mr. Kirkman.

Nevada basic science examinations October 3. Address Kenneth C. Kemp, Ph.D., secretary, Board of Examiners in the Basic Sciences, Box 9355, University of Nevada, Reno.

New Jersey examinations October 17-20. Applications must be filed 20 days in advance. Address Vincent Butler, M.D., secretary, Board of Medical Examiners, 28 W. State St., Trenton, 8.

New Mexico basic science examinations October 15. Address Mrs. Marguerite Cantrell, secretary, Board of Examiners in the Basic Sciences, Box 1522, Santa Fe.

New York examinations in December. Address Dr. John W. Paige, chief, Bureau of Professional Examinations and Registrations, 23 S. Pearl St., Albany.

Ohio examinations in December at Columbus. Address H. M. Platter, M.D., secretary, Medical Board, 21 W. Broad St., Columbus 15.

Oregon applications for reciprocity will be considered in October. Address Mr. Howard I. Bobbitt, executive secretary, Board of Medical Examiners, 609 Failing Bldg., Portland 4.

Rhode Island examinations October 5-6. Address Mr. Thomas B. Casey, Administrator of Professional Regulations, 366 State Office Bldg., Providence.

Basic science examinations November 8. Address Mr. Casey.

South Carolina examinations November 21 at Columbia. Address Ernest A. Johnson, D.O., secretary, Board of Osteopathic Examiners, Box 525, Summerville.

South Dakota basic science examinations first week in December. Address Gregg M. Evans, Ph.D., secretary, Basic Science Board, Box 506, Custer.

Tennessee basic science examinations given every 3 months. Address O. W. Hyman, M.D., secretary, Board of Basic Science Examiners, 62 S. Dunlap, Memphis 3.

Texas examinations November 30-December 2. Applications must be filed by October 30. Address M. H. Crabb, M.D., secretary, Board of Medical Examiners, 1714 Medical Arts Bldg., Fort Worth 2.

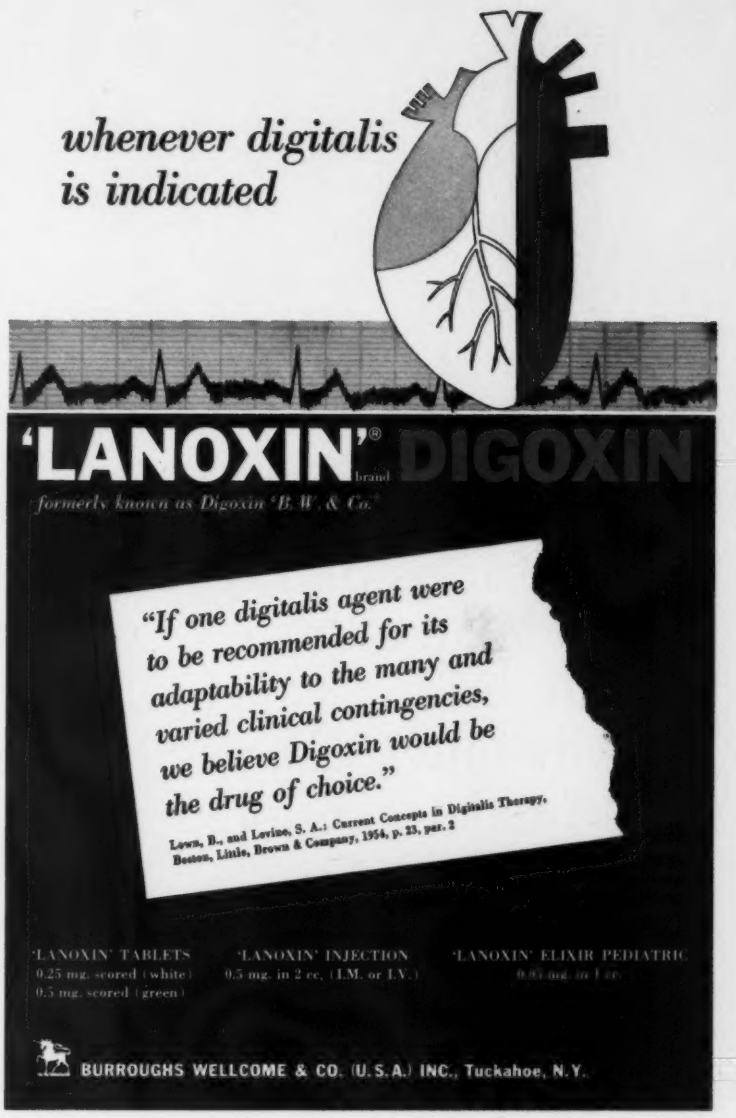
Virginia examinations in December. Address Russell Cox, M.D., secretary, Board of Medical Examiners, 505 Washington St., Portsmouth.

West Virginia examinations in October. Address Donald C. Newell, D.O., secretary, Board of Osteopathy, 137½ Main St., Oak Hill.

Wisconsin examinations in October at Madison. Address Thomas W. Tormey, Jr., M.D., secretary, Board of Medical Examiners, Room 28, 115 S. Pinckney St., Madison 2.

Wyoming examinations October 2 at Cheyenne. Address James W. Sampson, M.D., secretary, Board of Medical Examiners, State Office Bldg., Cheyenne.

Saskatchewan examinations in October at Saskatoon. Address Anna North-up-Little, D.O., 2228 Albert St., Regina.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Lown, B., and Levine, S. A.: Current Concepts in Digitalis Therapy, Boston, Little, Brown & Company, 1954, p. 23, par. 2
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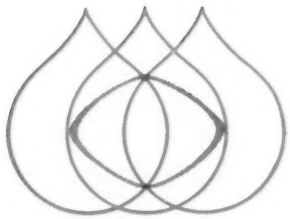

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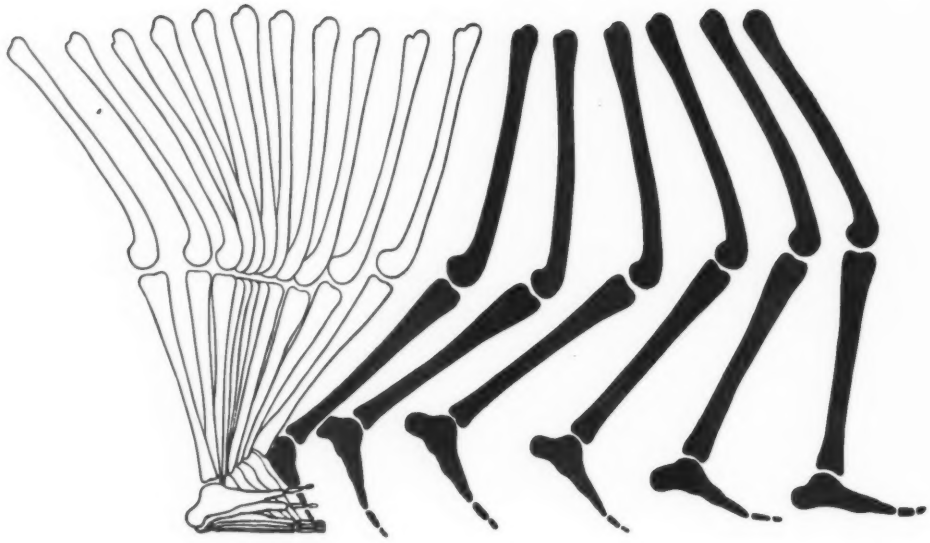
*J.A.M.A. *169*:41-45 (Jan. 3) 1959.



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Supplied: 1 cc. and 5 cc. vials

20 mg. per cc.
Each cc. contains:

Medrol (methylprednisolone) acetate	20 mg.
Polyethylene glycol 4000	29.6 mg.
Sodium chloride	8.9 mg.
Myristyl-gamma-picolinium chloride	0.19 mg.
Water for injection	q.s.

Supplied: 5 cc. vials

1. Norcross, B. M., and Winter, J. A.: Methylprednisolone acetate: a single preparation suitable for both intra-articular and systemic use, New York J. Med. *61*:552 (Feb. 15) 1961.

*Trademark, Reg. U. S. Pat. Off.
methylprednisolone acetate, Upjohn

The Upjohn Company, Kalamazoo, Michigan

Upjohn

relief within hours... lasting for weeks

Depo-Medrol* intra-articularly

COPYRIGHT 1961, THE UPJOHN COMPANY

six sizes
a thousand and one uses

The wide range of sizes of 'Vaseline' Sterile Petrolatum Gauze U.S.P. gives it a thousand and one uses in the hospital and the office treatment room. As a pressure dressing in surgery . . . an occlusive dressing in burns . . . an emollient dressing on dry and nonacute skin lesions . . . a packing in nose, eye, and ear procedures . . . here is a dressing that is convenient to use and of guaranteed, sealed-in sterility.

½" x 72" Selvage-edged Packing
(in disposable plastic tube)
Packing for nose, ear canal, or eye socket; submucous resection, rhinoplasty, ocular evisceration or other surgical intervention, nasal hemorrhage.

1" x 36" Strip
(in heat-sealed foil envelope)
Circumcisions, finger dressings, hand surgery, podiatric applications, small-area burns, pilonidal cysts, small packings.

3" x 9" Strip, and 3" x 3" Pad
(in heat-sealed foil envelope)
Skin grafts, colostomies, small-area wounds — traumatic or surgical.

3" x 18" Strip
(in heat-sealed foil envelope)
Burns, dermabrasion, traumatic wounds, eschar removal, abrasions, compound fractures, amputation stumps, urological and proctological work, and many other surgical procedures p.r.n.

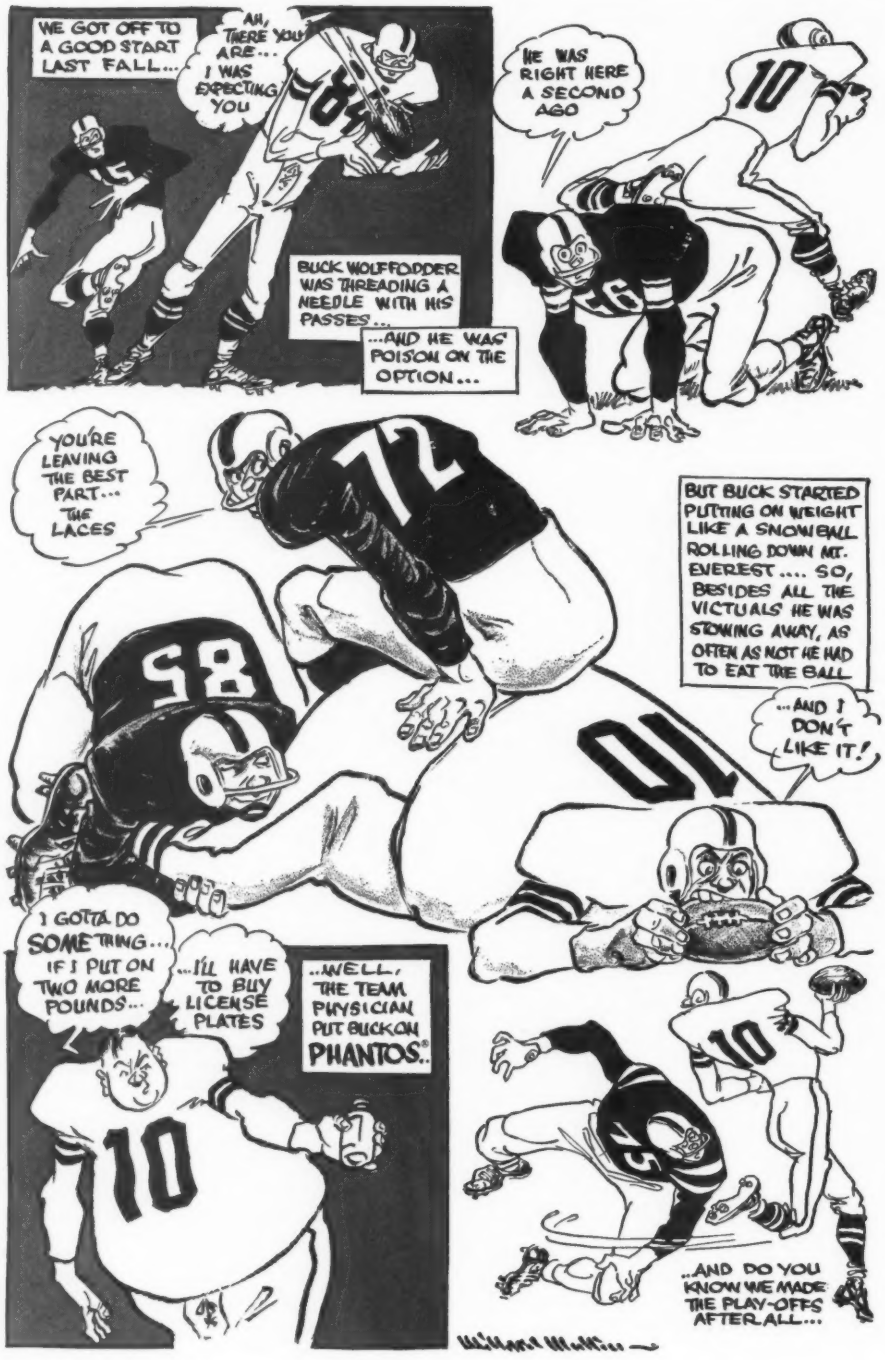
3" x 36" Strip
(in heat-sealed foil envelope)
When a larger dressing is needed for the indications above.

6" x 36" Strip
(in heat-sealed foil envelope)
Extensive burns, pemphigus, cancer resections, large-area wounds.

'Vaseline' Sterile Petrolatum Gauze U.S.P.

Professional Products Division • Chesebrough-Pond's Inc., New York 17, N. Y.

Observations on Adiposity by Millard Mullin--


WE GOT OFF TO A GOOD START LAST FALL...
AH, THERE YOU ARE... I WAS EXPECTING YOU
BUCK WOLFFODDER WAS THREADING A NEEDLE WITH HIS PASSES...
...AND HE WAS POISON ON THE OPTION...
HE WAS RIGHT HERE A SECOND AGO
YOU'RE LEAVING THE BEST PART... THE LACES
BUT BUCK STARTED PUTTING ON WEIGHT LIKE A SNOWBALL ROLLING DOWN MT. EVEREST.... SO, BESIDES ALL THE VICTUALS HE WAS STOWING AWAY, AS OFTEN AS NOT HE HAD TO EAT THE BALL
...AND I DON'T LIKE IT!
I GOTTA DO SOMETHING... IF I PUT ON TWO MORE POUNDS...
...I'LL HAVE TO BUY LICENSE PLATES
..WELL, THE TEAM PHYSICIAN PUT BUCK ON PHANTOS..
...AND DO YOU KNOW WE MADE THE PLAY-OFFS AFTER ALL...

PHANTOS **DLA*** anti-obesity capsules

Each capsule, taken on arising, provides:

Immediate Release		Intermediate Release		Final Release	
Amphetamine sulfate	5 mg.	Amphetamine sulfate	5 mg.	Amphetamine sulfate	5 mg.
Thyroid	½ gr.	Thyroid	½ gr.	Thyroid	½ gr.
Atropine sulfate	1/360 gr.	Atropine sulfate	1/360 gr.	Phenobarbital	¼ gr.
Aloin	¼ gr.			(WARNING: MAY BE HABIT-FORMING)	

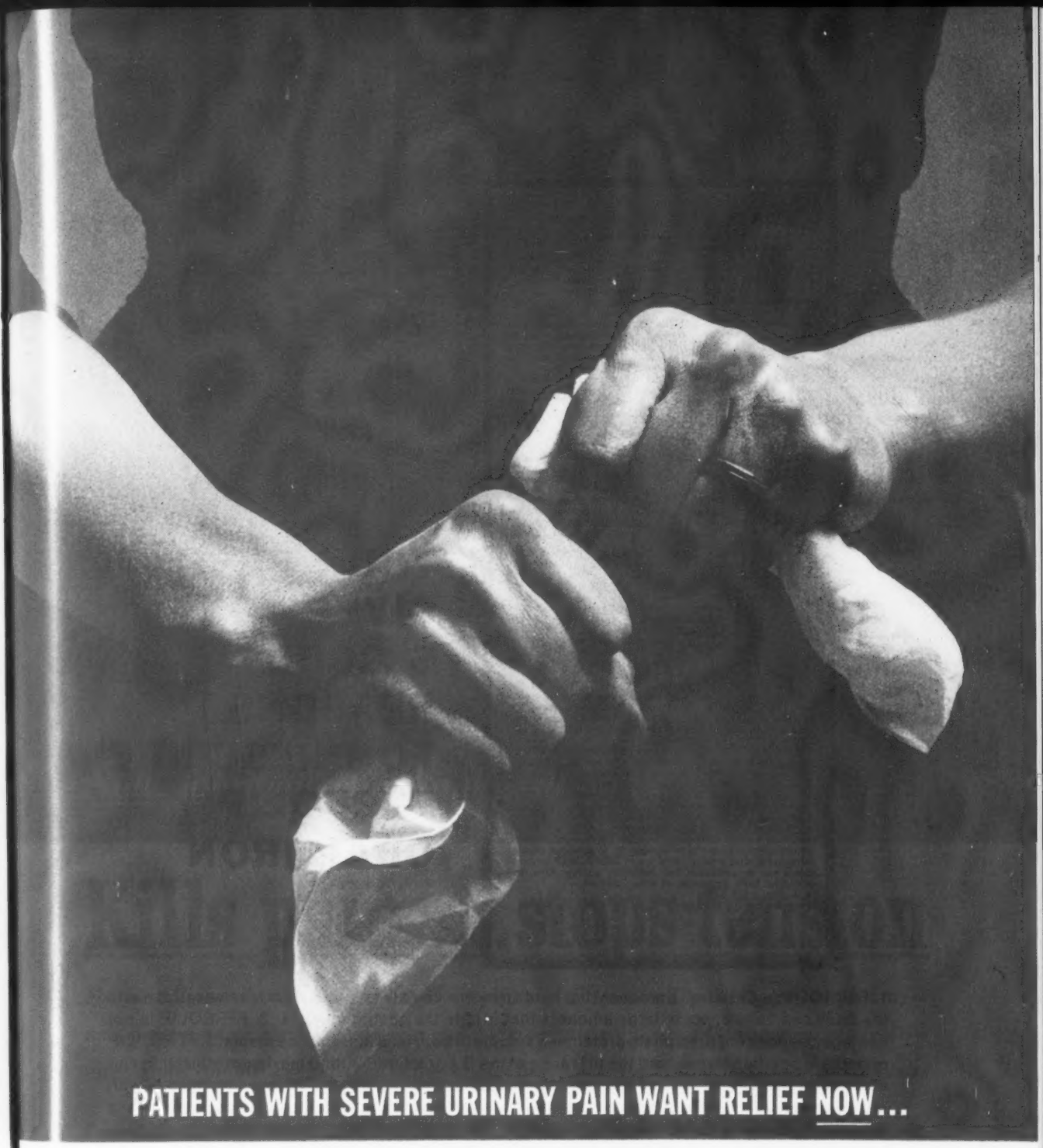
Supplied: PHANTOS, red and yellow capsules, bottles of 30, 250 and 500. PHANTOS-10, bottles of 30 and 250.

Precautions: Should be used with caution in patients hypersensitive to sympathomimetic compounds; in cases of coronary or cardiovascular disease; and in the presence of severe hypertension.

Samples and literature on request.

COOPER, TINSLEY Laboratories, Inc., Harrison, N. J.

*DAY-LONG ACTION



Rx PYRIDIUM®

brand of phenylazo-diamino-pyridine HCl

Two Pyridium tablets t.i.d. relieve the pain of urinary infection in only 30 minutes. During the first 3 to 4 days of therapy, Pyridium, prescribed along with any antibacterial of your choice, will make your patient comfortable until the antibacterial reduces inflammation and controls the infection.

AVERAGE DOSE: Adults—2 tablets t.i.d. Children 9 to 12 —1 tablet t.i.d. SUPPLIED: 0.1 Gm. tablets, bottles of 50. PRECAUTIONS: Pyridium is contraindicated in patients with renal insufficiency and/or severe hepatitis. *Full dosage information, available on request, should be consulted before initiating therapy.*

WARNER CHILCOTT

MORRIS PLAINS, N.J.

6P12

Makers of TEGRAL GELUSIL PROLOID PERITRATE MANDELAMINE

FLINT, Eaton & Company
DIVISION OF BAXTER LABORATORIES, INC.
MORTON GROVE, ILL.

COMPOSITION: One FERROLIP Tablet supplies 333 mg. of FERROLIP (iron choline citrate chelate), equivalent to 40 mg. of elemental iron. One teaspoonful (5 ml.) of FERROLIP 50 mg. Syrup contains 417 mg. of FERROLIP, equivalent to 50 mg. elemental iron. One teaspoonful (5 ml.) of FERROLIP 20 mg. Syrup contains 166 mg. FERROLIP, equivalent to 20 mg. elemental iron. Each ml. of FERROLIP Pediatric Drops contains 208 mg. FERROLIP, equivalent to 25 mg. elemental iron in a pleasantly flavored, nonalcoholic, sorbitol vehicle.

ACTION AND USES: For treatment of iron-deficiency anemias. The iron in FERROLIP is held as a *chelate complex* similar to the way iron is held in the hemoglobin molecule. As a result, *unlike freely dissociated iron salts*, FERROLIP does not release high concentrations of free ionic iron which have been reported to cause G.I. distress. And the iron *stays in solution throughout the pH range of the G.I. tract* for greater absorption and utilization. FERROLIP is *tolerated by patients who can't tolerate any other iron preparation*. It can even be given on an empty stomach. FERROLIP is also much safer to give as there is *no mass release of free iron into the serum with subsequent risk of toxic elevations*. The iron is released at a physiologic rate. Thus, an *excellent therapeutic response* can be achieved with greater safety and with few, if any, side effects.

ADMINISTRATION AND DOSAGE: Adults: 1 to 2 FERROLIP tablets or 1 to 2 teaspoonfuls of FERROLIP 50 mg. Syrup t.i.d.; children, 6 years and older: 1 FERROLIP tablet or 2 teaspoonfuls of FERROLIP 20 mg. Syrup t.i.d. Pediatric Drops: 0.5 cc. (9 drops) supplies 1.5-2.5 M.D.R. for prophylaxis in infants and children up to 6 years; therapeutic dose: multiples of 1 cc. (18 drops—25 mg.) as determined by physician.

HOW SUPPLIED: FERROLIP Tablets: bottles of 100 and 1000. FERROLIP 50 mg. Syrup: pints. FERROLIP 20 mg. Syrup: pints and gallons. FERROLIP Pediatric Drops: 30 cc. plastic, squeeze bottles.

ALSO AVAILABLE: FERROLIP Plus Tablets—for the treatment of microcytic and macrocytic anemias, combine ferrocholinate with the essential B vitamins including B_{12} and vitamin C. One tablet b.i.d. In bottles of 60 and 500 tablets. Also FERROLIP Plus Liquid: 1 or 2 teaspoonfuls t.i.d. In pint bottles.

FERROLIP OB Tablets—a comprehensive hematinic formulation for optimal supplementation during gestation—combines ferrocholinate; calcium salts; the essential B vitamins including B_{12}; vitamins A and D; and vitamin C. One tablet t.i.d. In bottles of 100 tablets. Also FERROLIP-T—an exceptionally palatable liquid supplying high potencies of vitamin B_1 and B_{12} to stimulate appetite in finicky eaters and convalescing individuals of all ages, and to promote optimal growth in below-par children, plus generous amounts of vitamin B_6 to improve protein utilization, and iron in the form of FERROLIP to overcome any concomitant iron-deficiency anemia. One teaspoonful daily. In bottles of 4 fluid ounces.

U.S. Pat. 2,575,611

LITERATURE: ON REQUEST

YOUR P.D.R.* GIVES YOU 6 GOOD REASONS TO PRESCRIBE FERROLIP® ORAL IRON

1. FERROLIP is *Chelated:* a process that binds iron in a chelate complex. Iron is released at a rate the body can handle, *not* in large amounts that irritate the gastric mucosa. **2.** FERROLIP is not astringent—does not precipitate protein—*is* soluble in both acid and alkaline media. **3.** FERROLIP remains in solution throughout the pH range of the G.I. tract, permitting maximum utilization and absorption. **4.** FERROLIP is so well tolerated it can be given to any patient (even to patients with peptic ulcer). **5.** FERROLIP is safer to give—safer to keep in the home because chelated iron is essentially nontoxic. **6.** FERROLIP produces an excellent hematological response.[1]

*This listing prepared by FLINT, Eaton & Company for Physician's Desk Reference.

1. Franklin, M., *et al.*: JAMA *166*:1685, 1958.

FERROLIP®

FLINT, Eaton & Company
DIVISION OF BAXTER LABORATORIES, INC.
MORTON GROVE, ILL.

Kills pain.....stops tension

For neuralgias, dysmenorrhea, upper respiratory distress and postsurgical conditions—new compound of Soma, phenacetin and caffeine kills pain, stops tension, reduces fever—gives more complete relief than other analgesics...acts fast, relief lasts four to six hours

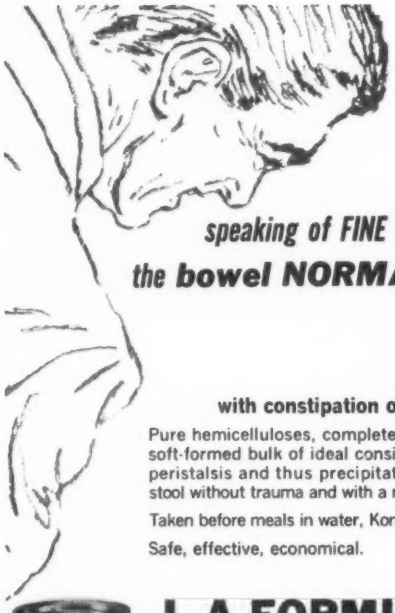
Composition: 200 mg. Soma (carisoprodol), 160 mg. phenacetin, 32 mg. caffeine. **Dosage:** 1 or 2 tablets q.i.d. **Supplied:** Bottles of 50 apricot-colored, scored tablets.

Also Available As
SOMA COMPOUND + CODEINE

Soma Compound boosts the effectiveness of codeine. Therefore, SOMA COMPOUND + CODEINE contains only ¼ grain of codeine phosphate to relieve the more severe pain that usually requires ½ grain. Otherwise, its composition—and dosage—is the same as Soma Compound. Supplied in bottles of 50 white, lozenge-shaped tablets.

soma® Compound

WALLACE LABORATORIES / Cranbury, N. J.



speaking of **FINE PRODUCTS**, *remember*
the **bowel NORMALIZERS** *of choice....*

KONSYL
for the obese patient
with constipation or non-specific diarrhea

Pure hemicelluloses, completely calorie-free, producing a soft-formed bulk of ideal consistency to stimulate normal peristalsis and thus precipitate easy passage of a bland stool without trauma and with a minimum of peri-anal soiling.

Taken before meals in water, Konsyl helps to depress appetite.

Safe, effective, economical.

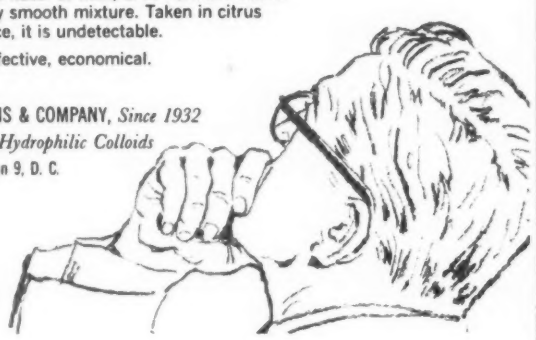
L.A.FORMULA
for the thin, finicky patient
with constipation or non-specific diarrhea

Pure hemicelluloses, ultra-pulverized to unique particle size and simultaneously dispersed in highest-grade lactose and dextrose to insure unsurpassed palatability, likewise acting to precipitate easy passage of soft formed stools for maximum relief of abnormal bowel function.

Taken in water or milk, L. A. Formula makes a velvety smooth mixture. Taken in citrus fruit juice, it is undetectable.

Safe, effective, economical.

Made by BURTON, PARSONS & COMPANY, *Since 1932*
Originators of Fine Hydrophilic Colloids
Washington 9, D. C.



Examination by National Board

The National Board of Examiners for Osteopathic Physicians and Surgeons, Inc. conducts Parts I and II of its examinations twice each year at the approved colleges. The next dates are November 10-11, 1961, and May 4-5, 1962. Application blanks may be obtained from the secretary of the Board or the dean of the college, and the completed application blank, together with check for the part to be taken, must be in the secretary's office not less than 30 days preceding the examination.

Examinations in Part I consist of anatomy, including histology and embryology; physiology; physiological chemistry; pathology; and microbiology, including immunology.

Part II consists of examinations in surgery, including applied anatomy, surgical pathology, and surgical specialties; neurology and psychiatry; public health, including hygiene; medical jurisprudence; obstetrics and gynecology; pediatrics; osteopathic principles, therapeutics, including pharmacology and materia media.

Part III is an oral and practical examination given under the supervision of a chief examiner who is a member of the Board and by a panel of associate examiners. Subjects covered in Part III are: anatomy; physiology; pathology; osteopathic principles, therapeutics and pharmacology; surgery; ophthalmology and otorhinolaryngology; obstetrics and gynecology; physical and clinical diagnosis; public health and communicable diseases.

These are oral examinations which the candidate may take after having satisfactorily completed the first six months of a 1-year internship in a hospital approved for intern training. Part III is given annually.

The next examinations in Part III will be given at Kansas City April 7-8, and at Philadelphia April 14-15, 1962.

All candidates are reminded that the examinations must be completed within a period of 7 years. Candidates who took Part I in 1955 must take Part III in 1962 or forfeit the right to complete the examinations.

Eligibility requirements are as follows: Part I, satisfactory completion of the first 2 quarters or trimesters of the sophomore year in an approved school of osteopathy; Part II, satisfactory completion of Part I and of the first two quarters or trimesters of the senior year in an approved osteopathic college; Part III, satisfactory completion of Part II and at least 6 months of a 1-year internship approved by the American Osteopathic Association.

Address all communications to Paul van B. Allen, D.O., secretary, 212 E. Ohio St., Chicago 11.

Reregistration of osteopathic licenses

November 1—Rhode Island $5.00. Address Mr. Thomas B. Casey, Administrator of Professional Regulations, 366 State Office Bldg., Providence.

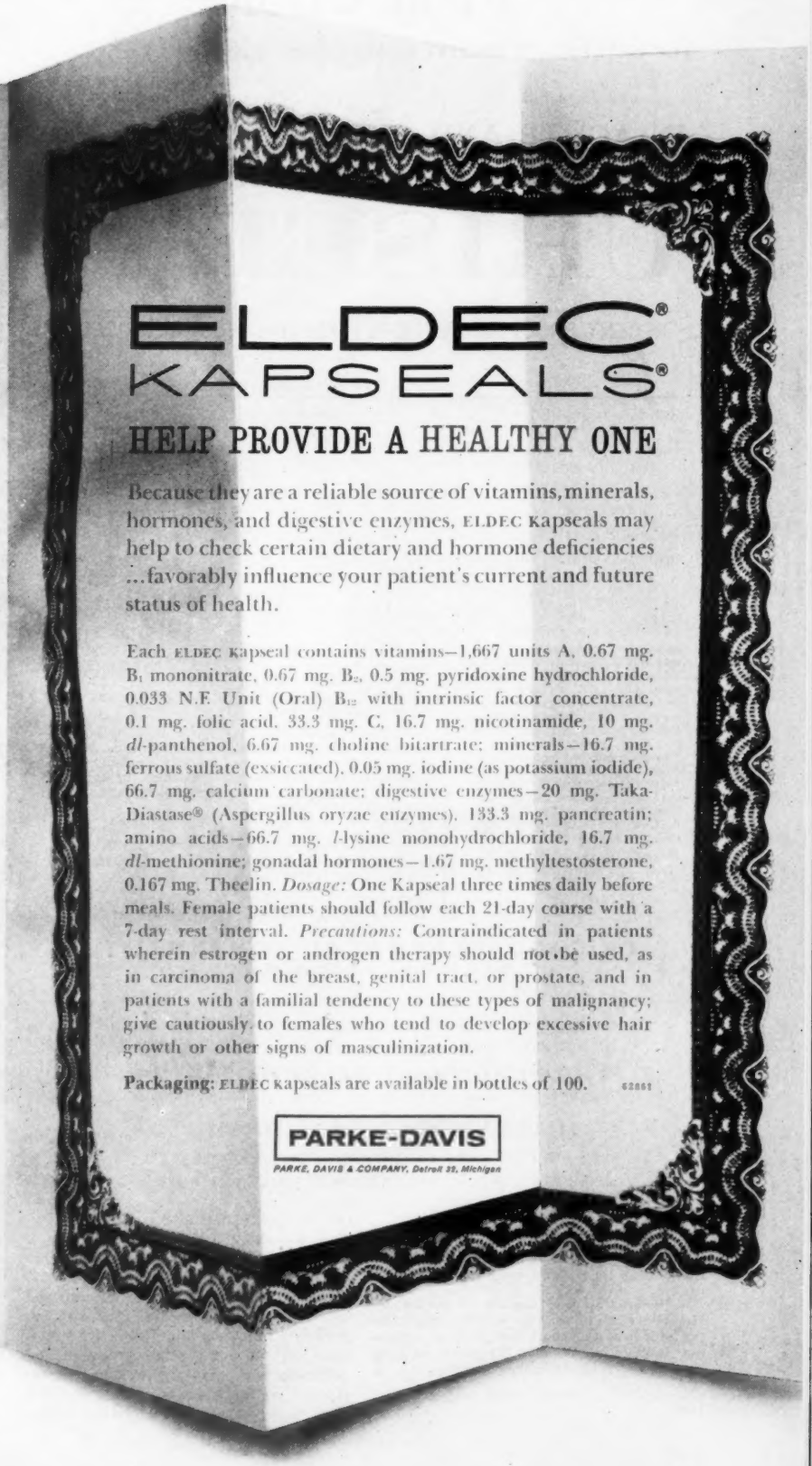
December 1—District of Columbia, $4.00. Address Mr. Paul Foley, deputy director, Department of Occupations and Professions, 1740 Massachusetts Ave., N. W., Washington 6, D. C.

December 1—Oregon, $20.00 residents; $5.00 nonresidents. Address Mr. Howard I. Bobbitt, executive secretary, Board of Medical Examiners, 609 Failing Bldg., Portland 4.

Specialty board examinations

Internal medicine examinations October 2-4 at Hotel Mark Hopkins, San Francisco, California. Address Glennard E. Lahrson, D.O., executive secretary, American Osteopathic Board of Internal Medicine, 400 40th St., Oakland 9, Calif.

A RETIREMENT FUND HELPS PROVIDE A **SECURE** FUTURE



ELDEC® KAPSEALS®

HELP PROVIDE A HEALTHY ONE

Because they are a reliable source of vitamins, minerals, hormones, and digestive enzymes, ELDEC Kapseals may help to check certain dietary and hormone deficiencies ...favorably influence your patient's current and future status of health.

Each ELDEC Kapseal contains vitamins—1,667 units A, 0.67 mg. B_1 mononitrate, 0.67 mg. B_2, 0.5 mg. pyridoxine hydrochloride, 0.033 N.F. Unit (Oral) B_{12} with intrinsic factor concentrate, 0.1 mg. folic acid, 33.3 mg. C, 16.7 mg. nicotinamide, 10 mg. *dl*-panthenol, 6.67 mg. choline bitartrate; minerals—16.7 mg. ferrous sulfate (exsiccated), 0.05 mg. iodine (as potassium iodide), 66.7 mg. calcium carbonate; digestive enzymes—20 mg. Taka-Diastase® (Aspergillus oryzae enzymes), 133.3 mg. pancreatin; amino acids—66.7 mg. *l*-lysine monohydrochloride, 16.7 mg. *dl*-methionine; gonadal hormones—1.67 mg. methyltestosterone, 0.167 mg. Theelin. *Dosage:* One Kapseal three times daily before meals. Female patients should follow each 21-day course with a 7-day rest interval. *Precautions:* Contraindicated in patients wherein estrogen or androgen therapy should not be used, as in carcinoma of the breast, genital tract, or prostate, and in patients with a familial tendency to these types of malignancy; give cautiously to females who tend to develop excessive hair growth or other signs of masculinization.

Packaging: ELDEC Kapseals are available in bottles of 100. 62661

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

First Choice

for safety • effectiveness • dependability [1-5]

IN ACUTE AND CHRONIC URINARY TRACT INFECTIONS

URISED®

RECENT PROOF OF CLINICAL EFFECTIVENESS OF URISED			
Author	No. of Patients Treated	Per cent of Satisfactory Response	Side Effects
Sands[1] (Trigonitis)	83	83.2	One (mild rash)
Haas & Kay[2] (Acute and Chronic Urinary Infections)	50	97	None
Renner,[3] et al. (Common Urinary Infections)	50	96	None
Marshall[4] (Cystitis)	100	80	None
Strauss[5] (Urinary Infections in the Aged)	50	72	None
Total Cases	333		

References: (1) Sands, R. X.: Trigonitis during Pregnancy: A Method of Treatment. New York St. J. Med. 61: 2598-2602, 1961; (2) Haas, Jr., J., and Kay, L. L.: Management of Urinary Tract Infections. Southwest. Med. 42:30-32, 1961; (3) Renner, M. J., et al.: Urinary Tract Infections: Treatment with Antiseptic-Antispasmodic Agent. Hosp. Topics 39:71-73, 1961; (4) Marshall, W.: Treatment of Cystitis in General Practice. Clin. Med. 7:499-502, 1960; (5) Strauss, B.: Treatment of Urinary Tract Infections in the Elderly. Clin. Med. 4:307-310, 1957.

Each Urised Tablet Contains:
Atropine Sulfate.....1/2000 gr.
Hyoscyamine.....1/2000 gr.
With Methenamine, Methylene Blue, Benzoic Acid, Salol and Gelsemium.

Indications:
Soothing, urinary antiseptic-antispasmodic for relief of pain, urgency, dysuria and frequency. Clinically safe and effective for treatment of acute or chronic cystitis, urethritis, pyelitis, pyelonephritis, prostatitis and ureteritis.

Dosage:
Adults: 2 tablets q.i.d. with full glass of water. Acute Cases: Start with 2 tablets every hour for three doses.

Supplied:
Bottles of 100, 1000 and 2000 tablets.

CHICAGO PHARMACAL COMPANY
5547 N. Ravenswood Ave., Chicago 40, Illinois

Governmental responsibilities in environmental health*

Leroy E. Burney, M.D.†

As I was having lunch in a hospital a couple of weeks ago, my eyes began to water and burn. The presumptive diagnosis was smog. I was in Los Angeles, a city of 6 million people and 3 million automobiles.

In this instance, I was being exposed to an environmental health hazard which produced an immediate, subjective symptom. For the many other environmental pollutants and conditions to which I was exposed on the same day, and to which all of us are exposed on every day of our lives, no such convenient, though uncomfortable, indicators exist. These, of course, include other chemicals present in air and in our water supplies, the additives in our food, the tensions, strains, noise and vibrations characteristic of our urbanized and industrialized nation, and the ionizing radiations which bombard us from both man-made and natural sources.

As we prepare to meet these new challenges, we in the health professions find ourselves entering into many new alliances. We discuss ionizing radiations with nuclear physicists, air pollution with meterologists, and water pollution with chemical engineers and aquatic biologists. These things seem far removed from the medical curriculums which many of us studied 20 or 30 years ago. Yet they are fundamental to the health of the American people in the coming years.

Accompanying this diversification of the health sciences has been a progressive complication of economic, social, and political patterns within which we carry on our work. Thus, while we are exploring new sciences on the one hand, we are also seeking to develop new modes of cooperation and interaction in the administrative and governmental fields.

Clearly, all levels of government must be deeply involved if we are to create and maintain a safe and healthful environment. Because both the causes and the effects of the new health challenges are nationwide in scope, the Federal Government has a vitally important role. There are equally cogent reasons for acceptance of responsibilities by State governments, by metropolitan agencies, and by strictly local units. Related responsibilities should logically be borne by nongovernmental organizations.

Generally speaking, prior to World War II, environmental health was viewed in terms of microbiological problems. The public health concern with water pollution related to biological contaminants. Community air pollution was localized, and control, for the most part, was smoke abatement and soot removal.

However, the war-spawned upsurge in scientific advancement and the postwar pattern of accelerating technology and population behavior have broadened considerably the public health base of environmental health. Biological contaminants in the environment are still a major factor. But now the complex chemical contaminants, their behavioral patterns in air and water and their composite and synergistic effects, need special attention. The unprecedented speed with which we are developing and using new substances and new materials has outdistanced our ability to determine and control their composite impacts on public health and well-being.

We need to keep in mind the predicted metropolitan-industrial growth factors. Currently 100 million people, 150 per cent more than in 1940, depend on surface streams for drinking water. By 1980 this figure will be 165 million. In 1970, three out of four people in the

†Dr. Burney, Surgeon General of the Public Health Service from 1956 to 1961, delivered this address at the annual meeting of the American Institute of Chemical Engineers held in Washington, D.C., December 7, 1960.

*Reprinted from *Public Health Reports*, April 1961.

vertigo is reversible

Antivert® stops vertigo

moderate to complete relief of symptoms in 9 out of 10 patients[1]

Prescribe one ANTIVERT tablet (or 1-2 teaspoonfuls ANTIVERT syrup) 3 times daily, before each meal, for prompt relief of vertigo, Meniere's syndrome and allied disorders. Side effects are short-lived, usually only harmless flushing and tingling associated with vasodilation. As with all vasodilators, ANTIVERT is contraindicated in severe hypotension and hemorrhage.

Supplied: Small blue-and-white scored tablets (meclizine HCl 12.5 mg. and nicotinic acid 50 mg.) in bottles of 100. Syrup (each 5 cc. teaspoonful contains meclizine HCl 6.25 mg. and nicotinic acid 25 mg.) in pint bottles. Prescription only. Bibliography available on request.

Reference: 1. Scal, J. C.: Eye Ear Nose & Throat Month. **38**:738 (Sept.) 1959.

And for your aging patients—
NEOBON® Capsules
five-factor geriatric supplement

ROERIG Rx

New York 17, N.Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

STEROIDS: FAR FROM ROUTINE THERAPY IN RHEUMATOID ARTHRITIS. "... it would now appear that the steroids should be employed infrequently in rheumatoid arthritis, and, when used, long-continued therapy should be avoided and the dosage reduced to the lowest possible level." [New and Nonofficial Drugs 1961, Philadelphia, J. B. Lippincott Co., 1961, p. 598.]

in rheumatoid arthritis

IS THIS THE ERA OF STEROID DISENCHANTMENT?

PLAQUENIL: EFFECTIVE LONG-TERM THERAPY THAT SPARES STEROIDS. Many physicians are now evaluating Plaquenil, the non-steroid antirheumatic of choice. Quite simply, Plaquenil provides conservative, safer, long-range management of rheumatoid arthritis. While the steroids often result in dramatic short-term improvement, Plaquenil affords a more practical, lasting solution to the long-term problems of this long-term disease, and makes it possible to utilize steroids sparingly. □ This is how: Full steroid dosage may be necessary only during the "latent" period of Plaquenil's cumulative action. Since two to four weeks may elapse before Plaquenil-treated patients experience subjective improvement, and six to twelve weeks before objective benefits are noted, it is advisable to maintain adequate steroid dosage when indicated—but only when indicated—during this time. Thereafter, as Plaquenil exerts greater therapeutic effects, steroid dosage may be reduced gradually. Salicylates too may be withdrawn as the need for adjunctive analgesia is diminished. □ The rheumatoid arthritic patient is then continued on Plaquenil; generally, no additional medication is required. Once improvement has been achieved, it can usually be maintained, since Plaquenil is the best tolerated of the 4-aminoquinoline compounds used in rheumatoid arthritis.

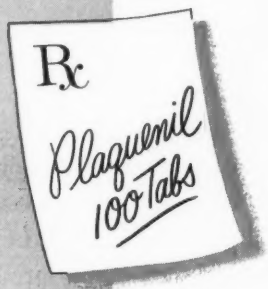
MAJOR IMPROVEMENT IN 60 TO 83 PER CENT OF PATIENTS. Clinical experience has shown that after six to twelve months of continuous administration, Plaquenil causes major improvement in 60 to 83 per cent of patients: subsidence of the active inflammatory process, diminution of joint effusion, slow fall in sedimentation rate, gradual rise in hemoglobin, relief of pain and tenderness, increased mobility, improvement in muscle strength, increase in finger dexterity, improvement in flexion deformities, diminution or disappearance of swellings and rheumatic nodules. There is a low incidence of major relapse following attainment of maximum improvement. □ Plaquenil sulfate, 200 mg. tablets. Initial dose: 2 or 3 tablets daily. Maintenance dose: 1 or 2 tablets daily. Write for booklet containing complete clinical experience, side effects, precautions, etc. □ When the patient also requires analgesia, Plaquenil with aspirin is available as Planolar (Plaquenil 60 mg. with aspirin 300 mg.).

SUMMARY OF PLAQUENIL ADVANTAGES:

PLAQUENIL ... is not a steroid
... provides conservative therapy
... affords lasting benefits
... spares steroids
... is generally well tolerated

PLAQUENIL ... acts cumulatively
... reduces need for steroids
... reduces need for analgesics
... works in conjunction with both steroids and aspirin

PLAQUENIL ... produces major improvement in 60 to 83 per cent of patients
... results in a low incidence of major relapse



Plaquenil®
SULFATE

NON-STEROID ANTIRHEUMATIC FOR SAFE, LONG-TERM THERAPY

Winthrop LABORATORIES
New York 18, N. Y.

Plaquenil (brand of hydroxychloroquine), trademark reg. U. S. Pat. Off. Planolar, trademark.

Where's the arthritic this morning?

Thanks to Medrol Medules, he woke up comfortable and he's already on the go.

The first long-acting oral steroid, Medrol Medules gives the arthritic patient therapeutic action that continues through the night. In many cases, morning stiffness can become a thing of the past.

The slow, steady release of methylprednisolone often provides greater effectiveness, with less frequent administration and sometimes a reduced total daily dosage.

Many of your arthritic patients, too, can wake up comfortable on Medrol Medules.

Dosage: The following dosages are recommended in rheumatoid arthritis:

	Initial	*Maintenance*
Severe	12 to 16 mg.	6 to 12 mg.
Moderately severe	8 to 10 mg.	4 to 8 mg.
Moderate	6 to 8 mg.	2 to 6 mg.
Children	6 to 10 mg.	2 to 8 mg.

With Medrol Medules, it may be possible to reduce the total daily dose by ⅓.

Indications and effects: Medrol benefits (anti-inflammatory, antiallergic, antirheumatic, antileukemic, antihemolytic) have been demonstrated in acute rheumatic carditis, rheumatoid arthritis, asthma, hay fever and allergic disorders, dermatoses, blood dyscrasias, and ocular inflammatory disease involving the posterior segment.

Precautions and contraindications: Because of Medrol's high therapeutic ratio, patients usually experience dramatic relief without developing such possible steroid side effects as gastrointestinal intolerance, weight gain or weight loss, edema, hypertension, acne, or emotional imbalance.

As in all corticotherapy, however, there are certain cautions to be observed. The presence of diabetes, osteoporosis, chronic psychotic reactions, predisposition to thrombophlebitis, hypertension, congestive heart failure, renal insufficiency, or active tuberculosis necessitates careful control in the use of steroids. Like all corticosteroids, Medrol is contraindicated in patients with arrested tuberculosis, peptic ulcer, acute psychoses, Cushing's syndrome, herpes simplex keratitis, vaccinia, or varicella.

Approximately 135 tiny "doses" mean smoother steroid therapy

Each capsule contains:
Medrol (methylprednisolone) 4 mg.
Supplied in bottles of 30 and 100.

Medrol* **Medules***

Upjohn *75th year*

*TRADEMARK, REG. U.S. PAT. OFF. COPYRIGHT 1961, THE UPJOHN COMPANY JUNE, 1961

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

United States will be breathing the air over only 10 per cent of the total land area.

Obvious questions are: At what point on this fantastic growth curve will we be in serious trouble? And just what will be the nature and extent of that trouble?

In seeking answers to these questions, the Public Health Service and other agencies have established programs designed to explore the medical and biological impact of various contaminants and to monitor public exposure to these hazards. The following discussion on chemical contaminants in water and air is a report of the Public Health Service's national monitoring networks on water and air.

CHALLENGE OF CHEMICAL CONTAMINANTS

Our drinking water nowadays contains an assortment of organic chemicals, many of them of industrial origin. The kinds and amounts of chemicals added to food are usually known, and suitable controls to protect health can be established. Yet water contains additives of unknown composition and in unknown concentrations. None of these additives improve the water, many of them damage its quality, and some may harm the consumer.

Concentrations of synthetic organics in water are low, usually ranging from 20 to 500 micrograms per liter. Nevertheless, even 1 microgram per liter of some chemicals causes difficulty. Chlorophenol causes taste in water, and endrin, a chlorinated insecticide, kills fish at this level.

One chloroform extract recently recovered from a river, and from the drinking water of a city using the river as a supply, has shown the presence of naphthalene, diphenyl ether, styrene, acetonitrile, ethylbenzene, tetralin, and chloroethyl ether. In another instance a toxic type of chemical was found in the Mississippi River from St. Louis to New Orleans, a distance of 1,000 miles.

Water consumers in some locations receive these mixed chemicals in amounts from a few micrograms to 1 or 2 milligrams per day. Whether a constant dosage of mixed organic chemicals occurring in drinking water can be harmful to humans is not known; the types of chemicals which have been recovered make it evident that we should find out.

Turning to the air pollution field, chemicals from chemical and metallurgical industrial sources contribute a large variety and tonnage of pollutants to the atmosphere as well as to water. However, the combustion of fuels contributes still greater variety and tonnage. Flames in furnaces and open fires and explosions in internal combustion engine cylinders synthesize many larger and more complex molecules than in the parent fuels, and fix atmospheric nitrogen. These reactions continue in the open atmosphere. These larger molecules result in the eye-irritating, plant-damaging, visibility-reducing smog of cities. A forecast of future energy usage shows large increases in consumption of coal, gas, and petroleum during the next 20 years, despite the advent of nuclear power.

The National Air Sampling Network monitors these airborne chemicals in 250 cities and nonurban sites, analyzing samples for 30 specific inorganic substances, and producing several organic fractions (aromatic, aliphatic, oxygenated-neutral) from which a number of organic substances have been isolated. These organic fractions are being tested in experimental animal colonies at the National Cancer Institute and at the University of Southern California for tumor production. To date about 20,000 samples have been obtained and more than 100,000 chemical analyses made.

One of the more than 30 substances found in community air, which the Public Health Service is analyzing, is benzo(a)-pyrene, also known as 3-4 benzpyrene, a representative of a larger class of polynuclear hydrocarbons which are presumed to have significance in the causation of cancer. According to our surveys, a person breathing nonurban air would inhale approximately 1 microgram of benzo(a)pyrene per year. The smoke from one pack of cigarettes per day would contribute about 60 micrograms per year. But a person inhaling the air in some cities would take in from 110 to

A SAFE APPROACH IN THE TREATMENT OF PSORIASIS

RIASOL

Clinically tested, safe and effective RIASOL offers maximum assurance against recurrence and adverse reactions.

RIASOL contains 0.45% Mercury chemically combined with soaps, 0.5% Phenol, and 0.75% Cresol. Available at pharmacies or direct in 4 and 8 fluid ounces. *Write for professional sample and literature.*

SHIELD *Laboratories*
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1961

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CHRISTMAS
SEALS

Contribute through your physicians, auxiliary, hospital guild, or The National Osteopathic Foundation, 212 East Ohio St., Chicago 11

Athlete's foot is caused by fungi invading the horny, keratinized layers of the skin not reached by the normal blood supply. Topical application of DESENEX, a combination of zinc undecylenate and undecylenic acid, brings these powerful antifungal agents into direct contact with troublesome fungi and quickly relieves—**and arrests**—the annoying condition.

Hundreds of thousands of athlete's foot infections have been arrested by topical treatment with DESENEX, among the best tolerated of all potent fungicidal agents.

And DESENEX is inexpensive—only pennies per treatment: DESENEX Ointment can be applied liberally to both feet every night for a week and a half from only a single tube. Itching and discomfort are stopped almost immediately. DESENEX is also recommended for treatment of other susceptible fungus infections of the skin and nails.

Dosage: At night, supply Ointment liberally to infected and surrounding areas. In the morning, rub or shake powder into the shoes and feet.

Supplied: Ointment—1 oz. tubes and 1 lb. jars. Powder—1½ oz. and 1 lb. containers. Solution (Undecylenic acid)—2 fl. oz. and 1 qt. bottles. Aerosol Spray—6 oz. cans.

Malthie Laboratories Division,
Wallace & Tiernan Inc., Belleville 9, N. J.

Desenex®
ointment • spray
powder • solution

Available in Canada through Elliott-Marion Company, Ltd., Montreal. PD-11

NEW—the first complete HEMATINIC at a cost comparable to straight iron therapy

STUARTINIC

in a one tablet dose

Complete
Therapeutic amounts of ferrous fumarate plus a bonus of Vitamin B Complex and Vitamin C.

More effective
More effective than ferrous gluconate or ferrous sulfate.*

Better tolerated
Less irritating, less nauseating, less toxic than other iron preparations.**

Lower in cost
The lowest cost complete Hematinic for iron deficiency anemias.

One tablet dosage
One small tablet per day provides enough iron for most patients.

Each STUARTINIC tablet provides:

IRON (from ferrous fumarate)	100 mg.
COPPER SULFATE	2.5 mg.
VITAMIN B COMPLEX	
B_1 (thiamine mononitrate)	2 mg.
B_2 (riboflavin)	2 mg.
B_6 (pyridoxine hydrochloride)	0.5 mg.
Niacinamide	10 mg.
d-Calcium Pantothenate	2 mg.
Liver (desiccated)	100 mg.
VITAMIN C (ascorbic acid)	50 mg.

Available at all pharmacies in bottles of 100 tablets.

*Blood, 15:540 (April) 1960.

**Am. Pract. & Digest Treat., 10:461 (March) 1959.

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Stuart

THE STUART COMPANY
PASADENA, CALIFORNIA

150 micrograms of benzo(a)pyrene per year.

The chemical findings reported here offer a supreme challenge to the public health physician. Our problem is one of chronic exposure—lifelong, 24 hours a day. Lead, for example, is present in our food, air, water, and tobacco, coming from such sources as agricultural sprays and automobile exhausts. The source of such a cumulative poison is less important than total exposure. Does our increasing use of tetraethyl lead in gasoline present a hazard, upsetting a delicate balance presently assumed to have a margin of safety? Or, examine sulfur dioxide, perhaps the commonest air pollutant. Apparently not cumulative, as is lead, its action appears to be one of repeated insult and irritation which may increase susceptibility and enhance the action of toxic agents. Do detergents in water act in toxic fashion, or do they increase cell permeability to aid the introduction of more injurious substances?

What about carcinogens in water and air? The urban-rural and the national distribution of excessive lung cancer mortality statistics suggest similarities to those of benzpyrene in air, although there are outstanding exceptions. Are there other agents in the cities, in rivers, in the air? Are there other factors such as crowding, culture, food, and background radiation? These questions pose problems for public health practice, for control action and prevention.

IMPLICATIONS OF IONIZING RADIATION

No discussion of our new environment as it affects our health would be complete without consideration of the health implications of ionizing radiation, dramatized by the upsurge of nuclear energy and its byproduct, radioactive isotopes, with manifold uses in medicine, industry, and research. To this must be added the x-ray, which not only has brought enormous benefits as a medical tool but which, improperly used, adds appreciably to the health problems of the nuclear age.

A hint at the vast scale of health implications of the rapidly developing nuclear age is given in a report of the National Advisory Committee on Radiation:

1. Between 1925 and 1955, the estimated annual whole-body x-ray doses received by the average individual in this country increased 900 per cent, from 15 millirems in 1925 to 135 millirems in 1955.

2. Between 1952 and 1958, the number of medical users of radioisotopes in the United States increased more than 400 per cent, from 445 to 1,935.

3. The predicted growth of U.S. nuclear power capacity from 1956 through 1995 will result in an increase in the accumulated volume of high- and intermediate-level wastes from 1,500,000 gallons to approximately 2 billion gallons.

Understanding the impact of radiation on living organisms is a particularly formidable challenge because it differs radically from phenomena with which we are more familiar. In radiation we are dealing with subatomic particles and forces. Since these exert their effects physically by means of high energies, they cause profound changes in living cells and tissues.

A tremendous amount of research has been done and a great deal is known about the health effects of ionizing radiations in relatively heavy dosages. It is well established, for example, that exposure to high but sublethal levels of radiation has three different kinds of deleterious effects on groups of laboratory animals: a general shortening of the lifespan, increased frequency of genetic mutations, and increased incidence of cancer.

Whether or not threshold levels for these effects exist, and if so what they are, comprises one of the most important of our research problems. Meanwhile we are compelled to assume, first, that any radiation is harmful at the cell or tissue level; second, that damage done is irreversible; and third, that radiation damage is, therefore, cumulative throughout a person's lifetime.

These, then, are among the health challenges of the contemporary environment. It is tempting to try to deal with them separately, in neatly packaged compartments labeled water pollution, air

CAMP

BRACES

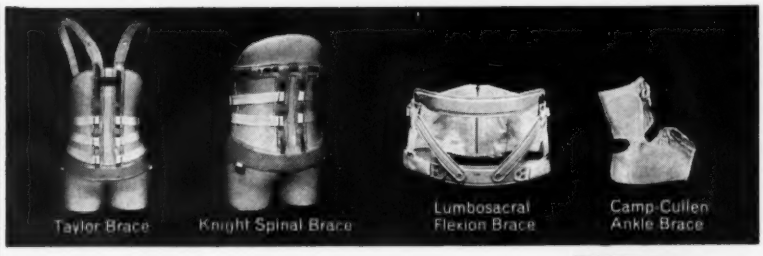
anatomically designed to help provide therapeutic immobilization where desired

Prefabricated Braces
Easily shaped, lightweight aluminum Knight Spinal and Taylor braces offer effective and limiting movement in the region of the lower lumbar spine. Inside padding is blanket material covered with soft horsehide; outside is white sturanhyde plastic. Detachable straps; choice of pad or adjustable side lacing garment belt front. Hose supporters and/or perineal straps.

Lumbosacral Flexion Brace
This brace is designed to exert a constant corrective force on the lumbar spine, lumbosacral joint and pelvis to help overcome any excessive lordotic lumbar curve. It permits free lumbar spine flexion but prevents extension and lateral bending. There are three points of pressure: the lower thoracic spine, the sacrum and lower abdomen. Fashioned abdominal belt is attached to the side bars. Zipper front closing.

Camp Cullen Ankle Brace*
This unique brace allows free flexion and extension; resists inversion as well as eversion besides giving additional security by controlling adduction and abduction rotational strains on the foot. Fits without discomfort. Front lacing for care in donning or removing.

*Pat. Pend.



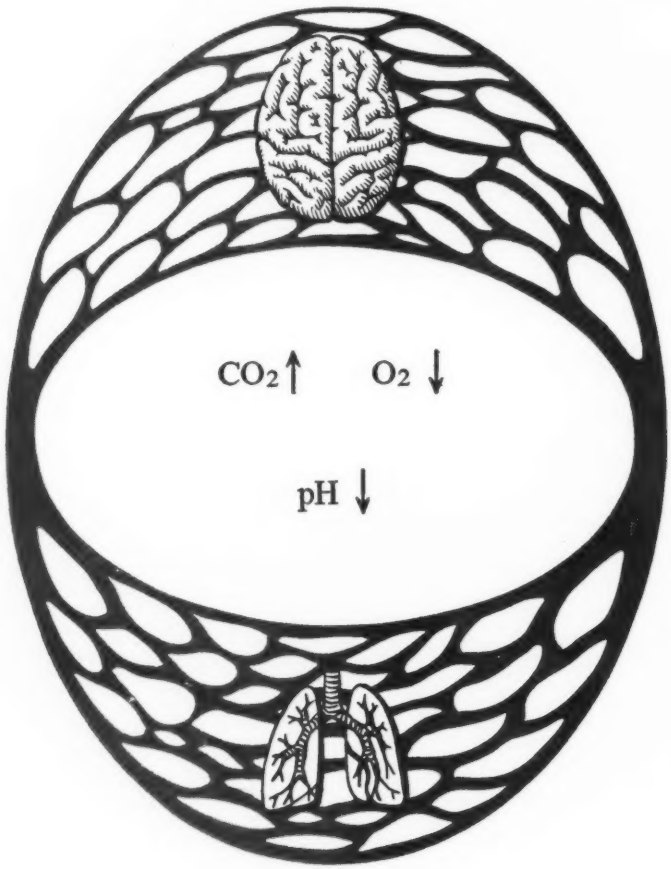
S.H. Camp and Company, Jackson, Michigan
S.H. Camp and Company of Canada, Ltd., Trenton, Ontario

CAMP

in respiratory disease

a selective respiratory stimulant

before therapy



these patient-complaints...

fatigue
somnolence
drowsiness
lethargy
mental confusion
irritability
personality changes
muscle weakness

in these clinical situations...

■ Frequent or refractory upper respiratory infectious or allergic disorders ■ Chronic bronchitis ■ "Heavy smoker's syndrome" ■ Geriatric respiratory involvement ■ Cardiopulmonary disease (cor pulmonale) ■ Chest cage abnormalities ■ Long exposure to occupational irritants; smog

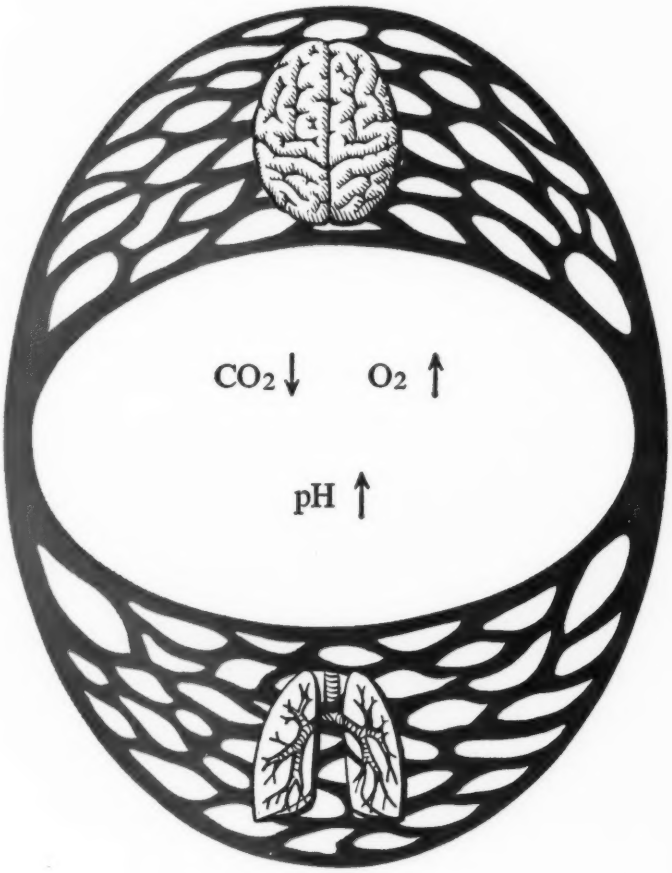
NOTE: EMIVAN VENTILATES. The effectiveness of EMIVAN is dependent upon a patent airway. Therefore, bronchodilators, corticosteroids, antimicrobials and wetting agents, and in severe cases, tracheal aspiration, if needed, should be employed as required to treat the underlying pulmonary disorder.

DOSAGE: To initiate therapy, 1 or 2 EMIVAN Tablets t.i.d. (Consult product brochure for complete dosage, administration, side effects, precautions and contraindications). ■ SUPPLIED: EMIVAN Tablets (uncoated providing 20 mg. vanillic diethylamide), bottles of 100 and 1000.

NEW... EMIVAN® TABLETS

brand of ethamivan

for treatment of symptoms of CO_2 accumulation



with Emivan

may be the result of CO_2 accumulation...

Consider that their specific complaints may be the consequences of CO_2 retention *(hypercapnia)* and secondary reduced oxygen saturation *(hypoxia)* due to hypoventilation.

and can be alleviated safely with EMIVAN

EMIVAN selectively stimulates the medullary respiratory center to increase the *depth* of breathing and (to a lesser extent) the *rate* of breathing . . . *without* cardiovascular side effects, neurological damage, or secondary post-stimulatory depression.

For the emergency treatment of the comatose or severely depressed patient (when due to depressant overdosage or severe pulmonary involvement): *INTRAVENOUS EMIVAN, can be life-saving*

U.S. VITAMIN & PHARMACEUTICAL CORP.
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keep hay fever under control[1-3]

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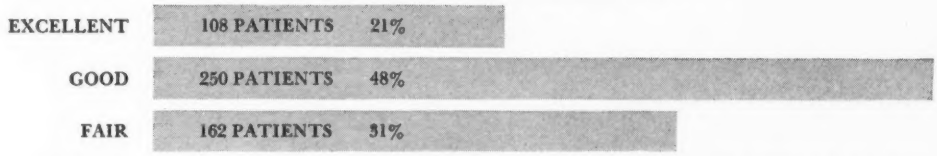
HYDROCHLORIDE

METHDILAZINE HYDROCHLORIDE, MEAD JOHNSON

prolonged antiallergic / antipruritic action

RESULTS OF TACARYL HYDROCHLORIDE THERAPY IN 520 ADULTS AND CHILDREN WITH HAY FEVER AND PERENNIAL RHINITIS*



*Adapted from Crepea, S. B.[1] **Degree of Relief: Excellent (90% to 100%); Good (60 to 90%); Fair (0 to 60%).**

dosage: *Adults:* Tablets—One tablet (8 mg.) twice daily. Syrup—Two 5 cc. teaspoonfuls (8 mg.) twice daily. Chewable Tablets—Two tablets (7.2 mg.) twice daily. *Children:* One-half adult dosage. Adjustment of dose or interval may be desirable for some patients.

side effects: Drowsiness has been observed in a small percentage of cases. Dizziness, nausea, headache, and dryness of mucous membranes have been reported infrequently.

contraindications: There are no known contraindications.

cautions: If drowsiness occurs after administration of Tacaryl Hydrochloride or Tacaryl Chewable Tablets, the patient should not drive a motor vehicle or operate dangerous machinery. Since Tacaryl Hydrochloride or Tacaryl Chewable Tablets may display potentiating properties, they should be used with caution in patients receiving alcohol, analgesics, or sedatives (particularly barbiturates). Because of reports that phenothiazine derivatives occasionally cause side reactions such as agranulocytosis, jaundice, and orthostatic hypotension, the physician should be alert to their possible occurrence—though no such reactions have been observed with Tacaryl Hydrochloride or Tacaryl Chewable Tablets.

supplied: Scored tablets, medium coral, 8 mg., bottles of 100. Syrup, 4 mg. per 5 cc. teaspoonful, 16 oz. bottles. Chewable Tablets, pink, 3.6 mg., bottles of 100.

references: (1) Crepea, S. B.: J. Allergy *31*:283-285 (May-June) 1960. (2) Clinical Research Division, Mead Johnson & Company. (3) Wahner, H. W., and Peters, G. A.: Proc. Staff Meet. Mayo Clin. *35*:161-169 (March 30) 1960.

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Mead Johnson Laboratories

Symbol of service in medicine

IN THE MENOPAUSE...

Mellaril®

THIORIDAZINE HCl

provides highly effective tranquilization, relieves agitation, apprehension, anxiety

and "screens out" certain side effects of tranquilizers, making it virtually free of:

"The aim of current chemical, pharmacological, and clinical investigations of the phenothiazines is to find derivatives possessing potent and selective tranquilization with a minimum of toxic action.... In agreement with the published results of other investigators, we believe that thioridazine [Mellaril] shows a greater specificity of tranquilizing action and freedom from serious toxic effects when compared with some of the other phenothiazines."[1]

In the Menopause: A series of 150 menopausal patients were observed during Thioridazine (Mellaril) therapy for two years. Most patients had multiple complaints; the chief ones listed: tension, insomnia, depression, fatigue and lethargy, irritability, chills, hot flashes and night sweats. The author states "The results were extremely good in those patients whose chief complaint was that of insomnia, tension, nervousness and, in general, the large group of menopausal symptoms that are due to disturbances of the psyche. The sense of 'well being' afforded these patients definitely decreased the intensity of 'hot flashes' and night sweats.... Eighty-five per cent of patients complaining of insomnia, nervousness and irritability received excellent relief."[2]

Mellaril is indicated for varying degrees of agitation, apprehension, and anxiety in both ambulatory and hospitalized patients.

Usual starting dose: Non-psychotic patients – 10 or 25 mg. t.i.d.; Psychotic patients – 100 mg. t.i.d. Dosage must be individually adjusted until optimal response. Maximum recommended dosage: 800 mg. daily. Supply: Mellaril Tablets, 10 mg., 25 mg., 50 mg., 100 mg.

1. David, N. A., Logan, N. D., and Porter, G. A.: Evaluation of Thioridazine (Mellaril), a new phenothiazine, in the hospitalized patient, A.M. & C.T. 7:364, June 1960. 2. Caldwell, W. G.: Emotional Disorders in the Menopause and Treatment with Thioridazine, presented at Bahamas Conference on Internal Medicine, Nassau, Bahamas, April 30-May 6, 1961.

ORIGINAL RESEARCH SERVING THE PHYSICIAN

SANDOZ

In summer respiratory allergies,

the treatment problem is to relieve congestion. Valuable as antihistamines are against sneezing, itchy, weeping eyes and rhinorrhea, they are less effective against nasal congestion.[1]

NOVAHISTINE®
DECONGESTS

Novahistine provides more than simple antihistaminic effect. It shrinks congested mucous membranes (nasal, pharyngeal, laryngeal, conjunctival), opens up air passages, promotes sinus drainage, and helps prevent mouth breathing.

NOVAHISTINE LP TABLETS

8 to 12 hour relief with a single adult dose of 2 tablets. Each tablet contains 25 mg. phenylephrine HCl (a vasoconstrictor that does not increase pulse rate) and 4 mg. chlorprophenpyridamine maleate (a potent, well-tolerated antihistamine).

NOVAHISTINE ELIXIR

exceptionally palatable liquid that children like to take. Each 5 ml. teaspoonful contains 5 mg. phenylephrine HCl and 2 mg. chlorprophenpyridamine maleate.

1. Beckman, H.: *Pharmacology: The Nature, Action and Use of Drugs*, 2nd Ed. W. B. Saunders Company, Philadelphia and London, 1961, p. 673.

PM

PITMAN-MOORE COMPANY
Division of The Dow Chemical Company
Indianapolis 6, Indiana

pollution, radiation, and so on. In fact, however, they are so interwoven, and so mutually reinforcing, that they can be dealt with most effectively if they are considered as parts of an interrelated whole, the total environment of modern man. Just as health itself is indivisible, so the environment is indivisible in its impact on human beings.

This environmental health problem differs from traditional health concerns in several important ways, some of which I have already suggested.

The first of these is the nature of the biological assault. The health professions and the public are accustomed to the communicable disease pattern, in which the timespan between exposure and onset is relatively short. Cause and effect relationships are relatively easy to establish, leading directly to preventive measures upon which much of public health and individual medical practice have been developed.

However, the health effects of chemicals and ionizing radiation often are far off in the future of the individual or even, in the case of radiation, of the species. Predicting those effects and relating them to cause is extremely difficult. The hazard to the individual is related to the cumulative total of minute quantities of radiation or chemical toxicants received continuously or intermittently throughout his life, regardless of their source. The genetic hazard to the species from low-level radiation, and possibly from chemicals, must be extrapolated far into the future and thus is even more difficult to assess.

APPORTIONMENT OF RESPONSIBILITY

A second fundamental difference between the new environmental problems and the more traditional health problems has to do with governmental and administrative patterns. Perhaps the greatest challenge that we face lies in the complexity of the political, social, and economic structure within which solutions must be found and applied.

It has been a long-standing principle in public health, as in many other fields, that the fundamental responsibility rests with the local community. And, having uttered the magic phrase "community responsibility," we seem to assume that clearly defined, firmly established communities exist which claim the unswerving loyalty of a certain specific group of people, generally referred to as "citizens," who have complete control of their collective destiny.

To the best of my knowledge, few such communities exist in our metropolitanized, industrialized Nation. Certainly they do not represent the dominant mode of existence in contemporary America. Instead, most of us live in a set of interlocking and overlapping communities which function, or fail to function, on a number of levels. We live in a subcommunity which gets its name from a housing development or shopping center. This is part of a suburb, which, in turn, is one of a number of satellites of a central city. This metropolitan complex almost undoubtedly occupies more than one country, and it may sprawl across two or three State lines.

Meanwhile, too often, this complex is being served by an administrative and political structure erected in horse-and-buggy days, when county seats were spaced a day's journey apart. The metropolis is the fact; the jurisdictions are, in the present context, fiction. "Local responsibility," in terms of modern environmental health problems, covers a multitude of localities sharing a common air supply, a common water supply, a common background of natural and man-made radiations, but usually lacking common administrative machinery.

Superimposed on this governmental tangle is the problem of economic responsibility in private enerprise. Some of the modern environmental pollutants are by-product wastes of industrial productions. Others, automotive exhaust is the most obvious, result not from the manufacturing process but rather from the use of the product. Still others, for example the use of radiation in medicine, result from the supplying of direct services to individuals.

In dealing with a microbiological threat to health, we can go all out for total eradication. But the microchemical

how shall she dress ? she wants to know now ..... you can tell her

(even in the first week)

with

Pro-Duosterone®

anhydrohydroxyprogesterone, 50 mg. } per tablet
ethinyl estradiol 0.03 mg. }

the 3-day, oral test for early diagnosis of pregnancy

If she is not pregnant, and has previously had regular menstrual cycles, withdrawal bleeding will occur within a few days after PRO-DUOSTERONE (1 tablet q.i.d. for 3 days). In functional amenorrhea, regular menstrual cycles may often be restored.

If she is pregnant, no progesterone withdrawal bleeding can occur. Moreover, PRO-DUOSTERONE actually protects pregnancy, and may be indicated to help improve implantation in habitual abortion.

". . . *a safe, physiologic method* . . . "[1], the convenient PRO-DUOSTERONE test has proved highly accurate (95.2% in 1,553 clinical studies) as early as a week after the first missed menses when animal tests cannot be considered valid.

Supplied: Bottles of 24 tablets.

1. Hayden, G.E.: Am. J. Ob. & Gyn. *76*:271, 1958.

ROUSSEL — Roussel Corporation, 155 East 44th Street, New York 17, N.Y.

Patients you treat with Metahydrin respond with gratifying benefits. Cardiac patients can breathe more satisfactorily and are not so quickly fatigued by mild exertion. They maintain stable nonedematous weight and, minus the burden of edema, are better equipped to withstand the stresses of daily living which occur even in convalescence. Hypertensive patients enjoy more normal blood pressures, are relieved of headaches, tachycardia and palpitations. Adjunctive antihypertensive therapies—and their well-known side effects—can be reduced. Dietary salt restrictions are usually not necessary, or need not be severe. In any patient requiring a diuretic Metahydrin provides smooth, adequate diuresis. And because all thiazides are *not* alike, the nature of Metahydrin diuresis is more clinically desirable; it expels more water, sodium and chloride and less potassium. In other words, more benefits, fewer troubles.

"Doctor, I walked to your office today!"

METAHYDRIN®

METAHYDRIN®, brand of trichlormethiazide, Lakeside. Supplied—tablets of 2 mg. and 4 mg. in bottles of 100 and 1000. Contraindications: Complete renal shutdown; rising azotemia or development of hyperkalemia or acidosis in severe renal disease.

LAKESIDE LABORATORIES, INC. Milwaukee 1, Wisconsin

WHY GANTRISIN IS PREFERRED

High urine levels are not enough: for successful eradication of urinary pathogens, the anti-infective agent must reach effective concentrations in blood and tissues, as well as in the urine. Gantrisin does this. Unlike compounds that inhibit bacterial growth in the urine and on epithelial surfaces only, Gantrisin acts in deeper tissue layers, too. Effective against common urinary pathogens (including many resistant strains) and highly soluble at full pH range, Gantrisin may be prescribed with unhesitating confidence in acute and chronic infections and for routine prophylaxis. Reports in hundreds of journals and scores of text-books reflect the position of Gantrisin as a drug of choice in genitourinary infections.

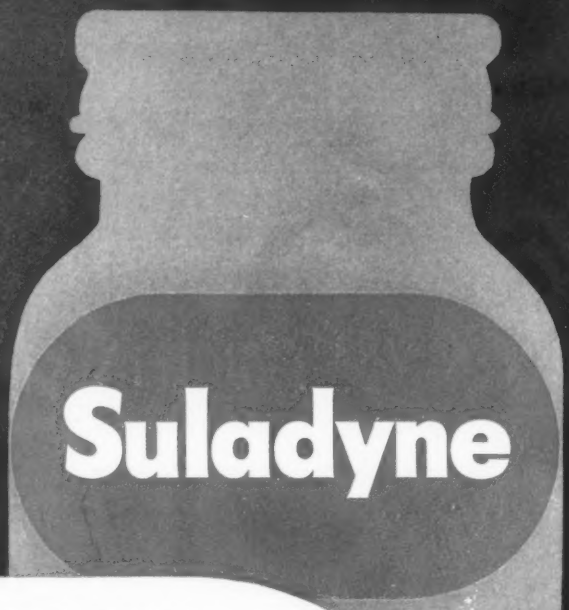
Consult literature and dosage information, available on request, before prescribing.

IN GENITOURINARY INFECTIONS

Gantrisin

THE QUALITY OF GREATNESS

A more complete product for the treatment of urinary tract infections



ATTACKS IN 3 WAYS

1. Provides rapid and high sulfa concentration in the urine.

2. Provides adequate sulfa blood levels in the infected tissue not reached by the high sulfa concentration in the urine.

3. Provides fast symptomatic relief making the patient more comfortable.

Sulfamethylthiadiazole

Sulfadiazine

This combination of sulfas provides a 2-prong attack on the infection and results in effective low sulfa dosage, high solubility and safety

Azodyne (Stuart brand of phenylazo-diaminopyridine HCl) Azodyne imparts an orange-red color to the urine.

1 TABLET CONTAINS:

SULFAMETHYLTHIADIAZOLE	125 mg.
SULFADIAZINE	125 mg.
AZODYNE	75 mg.

DOSE: Initially 4 tablets, then 2 tablets four times daily.

SUPPLIED: bottles of 100 tablets at all pharmacies.

Suladyne treats the infection and at the same time makes the patient more comfortable

Pasadena, **Stuart** California

TABLETS

INJECTION

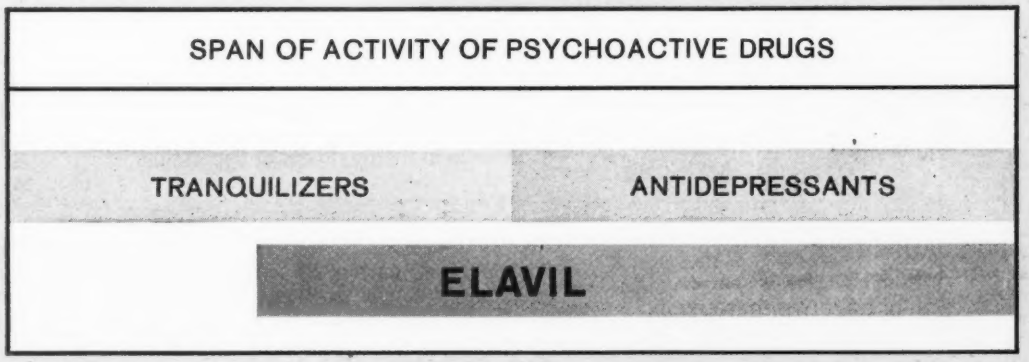
FOR YOUR PATIENT WITH DEPRESSION

ELAVIL®

AMITRIPTYLINE HYDROCHLORIDE

the antidepressant with a significant difference: • given orally or parenterally, ELAVIL provides PROMPT relief of associated anxiety, tension, and insomnia • followed by control* of underlying depression

*Some depressed patients respond within 5 to 10 days, while others may require up to two weeks or longer to obtain benefit.



- a single agent (not a combination of compounds)
- effective in all types of depression...particularly useful in depressed patients with predominant symptoms of anxiety and tension.
- may be used in ambulatory or hospitalized patients
- not an amine oxidase (MAO) inhibitor

MSD

please turn page for EXCERPTS FROM A SYMPOSIUM ON DEPRESSION

SYMPOSIUM ON DEPRESSION

with Special Studies of a New Antidepressant, Amitriptyline

A SCIENTIFIC MEETING

NEW YORK, N. Y.

MARCH 4, 1961

EXCERPTS FROM A SYMPOSIUM ON DEPRESSION

ELAVIL®

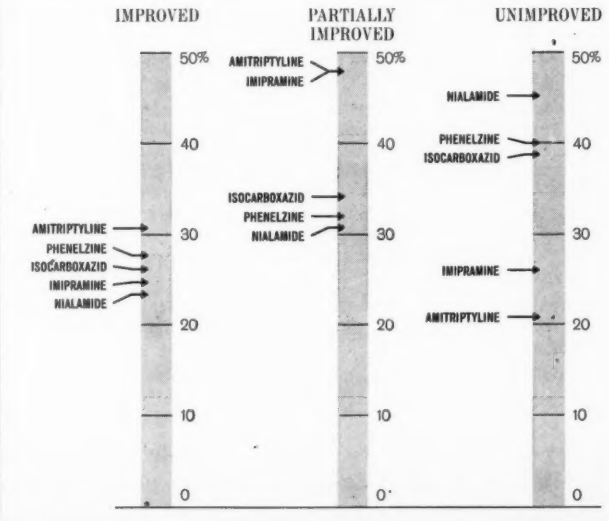
AMITRIPTYLINE HYDROCHLORIDE

INVESTIGATOR	FINDINGS
DUNLOP, EDWIN: The treatment of depression in private practice.	"Amitriptyline [ELAVIL] has a specific advantage over any antidepressant currently available and I see increasing evidence of its usefulness in reducing tension, agitation and anxiety, as well as in relieving the depressive quality of the illness. Amitriptyline appears . . . to combine better than any other antidepressant drug the successful treatment of anxiety at one end of the scale and depression at the other. Experience in the past has shown us that, when using electroshock or analeptics, although depression can be relieved, the accompanying anxiety eventually proves more troublesome than the depressive phase of the illness. Amitriptyline successfully bridges these divergent symptoms which are displayed in varying proportions in all depressive syndromes. ". . . Approximately one hundred and twenty patients have been studied with amitriptyline during the last fifteen months. It is an effective antidepressant when employed in both hospital and ambulatory patients. Its dependability and freedom from toxicity and severe side effects merit further evaluation on a broader spectrum of depressive disorders."
BENNETT, DOUGLAS: Treatment of depressive states with amitriptyline.	"In those cases showing a good response, early and dramatic improvement in sleeplessness resulted and many patients noted a feeling of relaxation. The ability of some patients to reduce their night sedatives after only a month's treatment was unique in my experience of the treatment of depression."
SAUNDERS, JOHN C.: Antidepressives: the pith of affective therapy.	"Its primary action in hospitalized psychotics is antidepressive; this along with its very low rate of side actions make it a drug of potentially frequent application in a broad spectrum of neuropsychiatric diseases. . . . Since a large part of any hospital population will reach a plateau if given only a tranquilizer or an energizer, we suggest that amitriptyline alone be given prior to combination therapy, as this drug is easier and safer to administer and produces a significant improvement in a high percentage of cases (60-75)."
OSTFELD, ADRIAN M.: Effects of an antidepressant drug on tests of mood and perception.	"Finally, it appears that amitriptyline in the doses employed here is relatively effective in depressed states of neurotic proportions. Its freedom from severe side effects in doses that are therapeutically effective seems established in this patient population."

(This symposium was published in Diseases of the Nervous System, Volume 22, Section Two—Supplement, May 1961)

INVESTIGATOR	FINDINGS
AYD, FRANK J., JR.: A critique of antidepressants.	"Amitriptyline and imipramine induce similar side effects but, generally speaking, those of amitriptyline cause less subjective discomfort in patients than those of imipramine. "... Many of the factors that favor a satisfactory response to these drugs are also those clinically associated with the expectation of a good reaction to ECT. The danger lies in their general slowness in taking effect which makes their use hazardous for severely depressed suicidal patients who, preferably, should be treated with electroshock therapy. Otherwise, these compounds can be a satisfactory substitute for shock therapy for most depressed patients. Thus, these drugs have lessened the need for ECT. On those occasions when ECT is necessary, if the shock therapy is combined with an antidepressant, ECT can be dispensed with after a few treatments."

COMPARISON OF THERAPEUTIC RESULTS WITH VARIOUS ANTIDEPRESSANTS



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EXCERPTS FROM A SYMPOSIUM ON DEPRESSION
(continued)

ELAVIL®

AMITRIPTYLINE HYDROCHLORIDE

INVESTIGATOR	FINDINGS
DORFMAN, WILFRED: Masked depression.	"In evaluating the effectiveness of amitriptyline in all these different settings, it was considered to be effective in 17 of the 25 patients (68%)."
FELDMAN, PAUL E.: Psychotherapy and chemotherapy (amitriptyline) of anergic states.	"Compared to other energizer compounds, particularly the hydrazines, amitriptyline appears to be relatively nontoxic. The laboratory reports for the most part remained within normal limits. Occasionally, abnormal readings were reported, but these appeared only sporadically and were not related to any clinical findings."

INDICATIONS: manic-depressive reaction—depressed phase; involutional melancholia; reactive depression; schizoaffective depression; neurotic-depressive reaction; and these target symptoms: anxiety; depressed mood; insomnia; psychomotor retardation; functional somatic complaints; loss of interest; feelings of guilt; anorexia. May be used whether the emotional difficulty is a manifestation of neurosis or psychosis,[1] and in ambulatory or hospitalized patients.[1,2,3]

USUAL ADULT DOSAGE: Tablets — initial dosage 25 to 50 mg. three times a day, depending on body weight, severity, and clinical disturbances. Dosage may be adjusted up or down depending upon the response of the patient. Some patients improve rapidly, although many depressed patients require four to six weeks of therapy before obtaining antidepressant response. For the ambulatory patient the dosage range for Tablets ELAVIL is 40 to 150 mg. daily. In the hospitalized patient, a daily dosage up to 300 mg. may be required. Injection ELAVIL may be given IM to rapidly calm depressed patients with symptoms of anxiety and tension while instituting therapy of the underlying depression. Initial therapy is 2 to 3 cc. (20 to 30 mg.) IM, q.i.d.

The natural course of depression is often many months in duration. Accordingly, it is appropriate to continue maintenance therapy for at least three months after the patient has achieved satisfactory improvement in order to lessen the possibility of relapse, which may occur if the patient's depressive cycle is not complete. In the event of relapse, therapy with ELAVIL may be reinstituted.

ELAVIL is not a monoamine oxidase (MAO) inhibitor. It does, however, augment or may even potentiate the action of MAO inhibitors. Thus, in patients who have been receiving MAO inhibitors, ELAVIL should be instituted cautiously after the effects of the MAO inhibitors have been dissipated. No evidence of drug-induced jaundice, agranulocytosis, or extrapyramidal symptoms has been noted. Side effects with ELAVIL are seldom a problem and are not serious. They are dosage-related and have been readily reversible. Side effects (drowsiness, dizziness, nausea, excitement, hypotension, fine tremor, jitteriness, headache, heartburn, anorexia, increased perspiration, and skin rash), when they occur, are usually mild. However, as with all new therapeutic agents, careful observation of patients is recommended. As with other drugs possessing significant anticholinergic activity, ELAVIL is contraindicated in patients with glaucoma, prostatic hypertrophy and urinary retention.

SUPPLY: Tablets, 10 mg. and 25 mg., in bottles of 100 and 1000. **Injection** (intramuscular), in 10-cc. vials, each cc. containing 10 mg. amitriptyline hydrochloride, 44 mg. dextrose, 1.5 mg. methylparaben, 0.2 mg. propylparaben, and water for injection q.s.

REFERENCES: 1. Ayd, F. J., Jr.: Psychosomatics 1:320, Nov.-Dec. 1960. 2. Dorfman, W.: Psychosomatics 1:153, May-June 1960. 3. Barsa, J. A., and Saunders, J. C.: Am. J. Psychiat. 117:739, Feb. 1961.

Before prescribing or administering ELAVIL, the physician should consult the detailed information on use accompanying the package or available on request.

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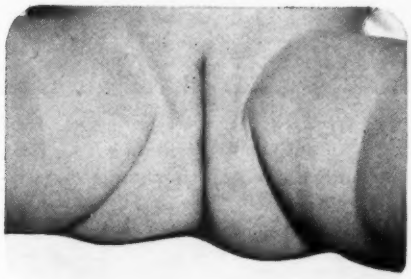
SHORTENS THE HEALING TIME... DIAPER RASH

Before application of A and D Ointment—Typical diaper rash with excoriation of skin.



After application of A and D Ointment—Diaper rash has completely disappeared within one week.

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REG. T.M.

completely safe, highly effective—heals, soothes and protects / A and D Ointment both treats and prevents diaper rash. In seconds, it soothes painful irritated skin—starts to heal excoriation. It may be applied liberally at every diaper change, is eminently safe for even the most delicate tissues. Will not stain the skin or wash away in body secretions. Easily laundered from diapers or clothing. / A and D Ointment is also useful for pressure sores, varicose and chronic ulcers, nipple care (fissured nipples), episiotomy and circumcision wounds, eczema, detergent dermatitis, burns, wounds and skin abrasions.

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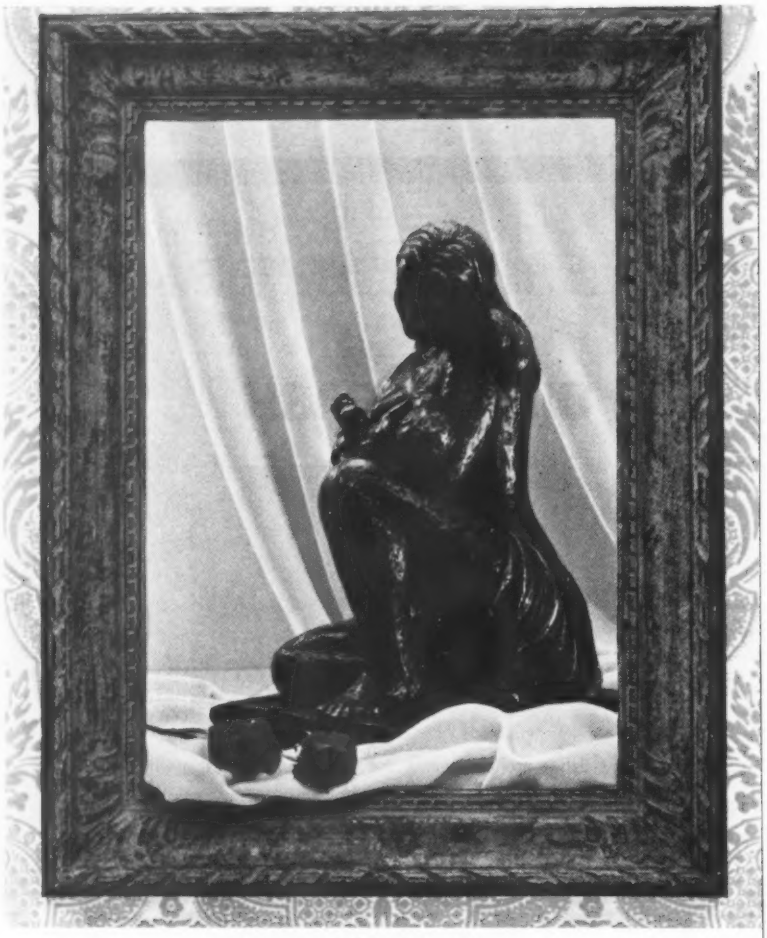

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1. The Composition of Milks, Publication 254, National Academy of Sciences and National Research Council, Revised 1953. 2. Brown, G. W.; Tuholski, J. M.; Sauer, L. W.; Minsk, L. D., and Rosenstern, I.: J. Pediat. *56*:391 (Mar.) 1960.

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and microphysical hazards are undesirable effects of highly desirable processes. We must seek not eradication but containment. We need to evolve relationships and apportion responsibilities which permit full utilization of modern technology at minimum hazard.

Plainly, there are three broad avenues of approach which must be followed simultaneously and at accelerating speed if we are to strike this kind of balance:

First, research programs which provide knowledge as to the health effects of specific environmental pollutants, singly and in combination, cumulatively over periods of years.

Second, comprehensive environmental monitoring programs to maintain a continuous check on the nature and degree of population exposure to these pollutants.

Third, the development and application of control procedures to eliminate unnecessary exposure wherever it may occur.

The key word here is "simultaneously." The need for more knowledge cannot justify needless delay in the application of controls. We are confronted by health problems which develop over periods of years or even generations. To wait until the final proof is in before taking steps to reduce pollution would be indefensible at best and suicidal at worst.

This is the nature of the road ahead. The governmental problem in environmental health is: Who shall be responsible for what? It demands hard, cold, realistic answers.

In the Public Health Service we are in process of regrouping and strengthening our forces to deal effectively with what we conceive to be our areas of special responsibility.

Administratively, our programs in water pollution control, air pollution, radiological health, and occupational health have all been raised to the status of operating divisions within the past 3 years. Congress has under consideration combining these and related programs into a new Bureau of Environmental Health, parallel organizationally to the three existing bureaus.

This new bureau will provide for the integration of the medical and engineering components of our environmental programs, and make optimal use of the many research and other methods which are applicable across the board in environmental health. It will combine a strong intramural research program with an extensive extramural, grant-supported program making use of laboratories of universities, industrial organizations, and other agencies.

Meanwhile, our research effort has already been greatly augmented, especially in air pollution and radiation. We are conducting and supporting studies of the biomedial effects of specific pollutants and controlled radiation doses on laboratory animals. We are carrying out broad-scale epidemiological studies designed to detect relationships which may exist between specific disease conditions and environmental exposures. We are, as I have already noted, widening the coverage of our monitoring networks in water, air, and radiation.

In addition to its function in research and investigations, the Public Health Service is assisting State and local health agencies to develop vigorous and effective environmental health programs. To date, their interest and willingness to undertake such activities has run far ahead of the supply of available personnel; for this reason, a very sizable portion of our environmental health funds is being devoted to technical training. The Sanitary Engineering Center at Cincinnati, long overburdened, has been supplemented by three regional radiological health laboratories at Montgomery, Ala., Las Vegas, Nev., and Rockville, Md., designed to serve the States in their respective regions. Numerous State and local agencies are already supplying invaluable baseline data and making other important contributions of environmental health protection. We look forward confidently to more of the same.

This upsurge of interest at all levels of governmental health administration is most heartening. It represents a basic change of attitude by the public health profession, and a broadening definition of public health.

in strains or sprains

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buccal tablets

can make a difference to your patient/ reduce recovery time/add comfort to convalescence

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1951-1961...Bentyl controls G.I. spasm and pain

...yet atropine precautions ordinarily need not be observed.*

Selectivity is the key to a decade of success

*Even when spasm is concurrent with glaucoma or prostatic hypertrophy, because of the specificity of Bentyl for the G. I. tract.

BENTYL

(dicyclomine) Hydrochloride

Bentyl stands apart from antisecretories and other antispasmodics in combining effectiveness with outstanding toleration. Usual adult dosage is 20 mg. t.i.d. There is a Bentyl dosage form to suit every age group and therapeutic need. See page 661, *Physicians' Desk Reference*, 1961.

Brochure with full product information available on request.

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spares your patient a lengthy and troublesome recovery

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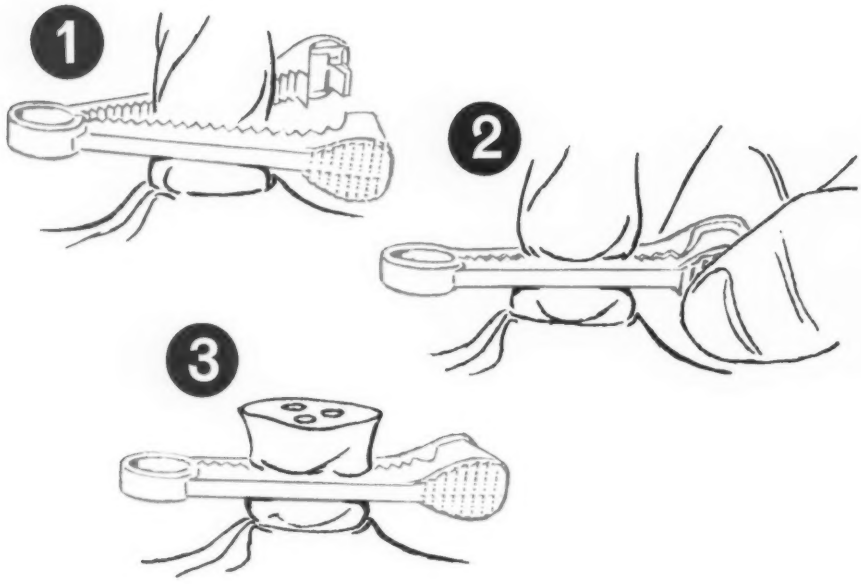
a better way to

Seal the umbilical cord...



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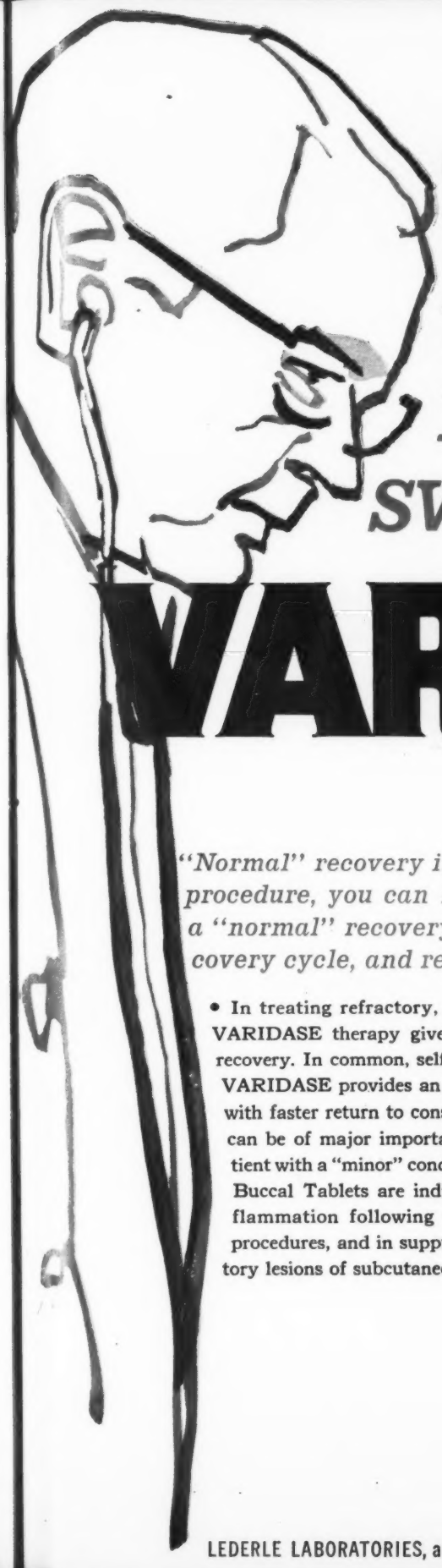

do all you can whenever there is local inflammation/ swelling/pain...

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"Normal" recovery is not enough. Now, by adding VARIDASE to your procedure, you can release your patient from the stress and pain of a "normal" recovery—put comfort in convalescence, shorten the recovery cycle, and reap the reward of greater patient appreciation.

• In treating refractory, chronic conditions, VARIDASE therapy gives added impetus to recovery. In common, self-limiting conditions, VARIDASE provides an easier convalescence with faster return to constructive living. This can be of major importance even to the patient with a "minor" condition. • VARIDASE Buccal Tablets are indicated to control inflammation following trauma or surgical procedures, and in suppurative or inflammatory lesions of subcutaneous and deep tissues.

• Precautions: VARIDASE has no adverse effect on normal blood clotting. Care should be taken in patients on anticoagulants or with a deficient coagulation mechanism. When infection is present, VARIDASE Buccal Tablets should be given in conjunction with antibiotics.

• Dosage: *One buccal tablet four times daily usually for five days. To facilitate absorption, patient should delay swallowing saliva.*

• Supplied: *Each tablet contains 10,000 Units Streptokinase, 2,500 Units Streptodornase. Boxes of 24 and 100 Tablets.*

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'THORAZINE' PRESCRIBING INFORMATION

Because of its pronounced calming effect, 'Thorazine' is an outstanding agent for patients in whom agitation and hyperactivity present a management problem. In severe cases, initial use of intramuscular administration may be desirable to control symptoms promptly.

Before prescribing 'Thorazine' for other indications than those given below, the physician should be familiar with the dosage, side effects, cautions and contraindications for such uses. This information is available in the *Thorazine® Reference Manual* and *Physicians' Desk Reference*, and from your SK&F representative or your pharmacist.

ADULT DOSAGE AND ADMINISTRATION

Dosage should always be adjusted to the response of the individual and the severity of the condition. It is important to increase dosage until symptoms are controlled or side effects become troublesome.

Mental and Emotional Disturbances of Everyday Practice— Depending on severity, *starting oral dosage* is 10 mg. t.i.d. or q.i.d., or 25 mg. b.i.d. or t.i.d. After a day or two, dosage may be increased by increments of 20 mg. to 50 mg. daily, at semiweekly intervals (increase should be more gradual in emaciated or senile patients) until achieving maximum clinical response. Continue dosage at this level for at least two weeks; then it can usually be reduced to a maintenance level. A daily dosage of 200 mg. is "average," but in some cases, such as discharged mental patients, daily dosages as high as 800 mg. may be necessary. *Starting intramuscular dose* is 25 mg. (1 cc.). If necessary, and if no hypotension occurs, repeat the initial dose in one hour. Subsequent dosages should be oral, starting at 25 mg. to 50 mg. t.i.d.

Alcoholism—*Severely agitated patients:* *Starting intramuscular dose* is 25 mg. to 50 mg. (1-2 cc.). Repeat initial dose if necessary and if no hypotension occurs. Start subsequent oral dosages at 25 mg. to 50 mg. t.i.d. ***Agitated but manageable patients:*** *Starting oral dose* is 50 mg., followed by 25 mg. to 50 mg. t.i.d. For ambulatory patients with withdrawal symptoms or sober chronic alcoholics, *starting oral dosage* is 10 mg. t.i.d. or q.i.d., or 25 mg. b.i.d. or t.i.d. Patients in a stuporous condition should be allowed to sleep off some of the effects of the alcohol before 'Thorazine' is administered.

Hospitalized Psychiatric Patients—*Acutely agitated, manic, or disturbed patients:* *Starting intramuscular dose* is 25 mg. (1 cc.). If no marked hypotension occurs, an additional 25 mg. to 50 mg. injection may be given after one hour. Subsequent intramuscular dosages may be increased gradually over a period of several days—even up to 400 mg. q4-6h in exceptionally severe cases—until the patient is controlled. (In elderly or emaciated patients the dosage should be increased more slowly than in other patients.) Usually the patient becomes quiet and cooperative within 24 to 48 hours after the initial dose, at which time oral doses may gradually be substituted for intramuscular doses (mg. for mg. or higher). Even if control is not complete, oral doses may gradually replace intramuscular doses. During this period, oral dosage should be increased rapidly until the patient is calm. Usually an *oral dose* of 500 mg. a day is sufficient but, if necessary, the dosage may be gradually increased still further to 2,000 mg. a day or higher. ***Less acutely agitated patients:*** *Starting oral dose* is 25 mg. t.i.d. Subsequently, increase the amount gradually until an effective dosage is reached—usually 400 mg. daily is sufficient. ***Duration of therapy:*** It is important to determine the optimal dosage regimen and to continue treatment long enough for maximum clinical response. Maximum improvement is sometimes not apparent until after weeks or even months of therapy.

PEDIATRIC DOSAGE AND ADMINISTRATION

Behavior Disorders—*Oral dosage* is on the basis of ¼ mg./lb. of body weight q4-6h, until symptoms are controlled (i.e., for 40 lb. child—10 mg. q4-6h). Calculate 'Thorazine' Syrup dosage at 10 mg./5 cc. tsp. *Rectal dosage* is on the basis of ½ mg./lb. of body weight q6-8h; p.r.n. (i.e., for 20-30 lb. child—half of a 25 mg. suppository q6-8h). *Intramuscular dosage* is on the basis of ¼ mg./lb. of body weight q6-8h, p.r.n. In children up to 5 years (or 50 lbs.)—not over 40 mg./day. In children 5-12 years (or 50-100 lbs.)—not over 75 mg./day. *Note:* In severe cases, 50-100 mg. daily has been used and, in older children, 200 mg. or more daily may be required.

IMPORTANT NOTES ON INJECTION

Except for acute ambulatory cases, parenteral administration should generally be reserved for bedfast patients. Parenteral administration should always be made with the patient lying down and remaining so for at least ½ hour afterward because of possible hypotensive effects. The injection should be given *slowly, deep* into the upper outer quadrant of the buttock. If irritation and pain at the site of injection are problems, dilution of 'Thorazine' Injection with physiologic saline solution or 2% procaine solution may be helpful. Subcutaneous administration is not advisable, and care should be taken to avoid injecting undiluted 'Thorazine' Injection into a vein. Intravenous administration is recommended only for severe hiccups and surgery. Because contact dermatitis has been reported, avoid getting the solution on hands or clothing.

SIDE EFFECTS

The drowsiness caused by 'Thorazine' may be unwanted in some patients. It is usually mild to moderate and disappears after the first or second week of therapy. If, however, drowsiness is troublesome, it can usually be controlled by lowering the dosage or by administering small amounts of dextro amphetamine.

Other side effects that have been reported occasionally are dryness of the mouth, nasal congestion, some constipation, miosis in a few patients and, very rarely, mydriasis. Mild fever (99°F.) may occur occasionally during the first days of therapy with large intramuscular doses. During 'Thorazine' therapy some patients have an increased appetite and gain weight. Usually these patients reach a plateau beyond which they do not gain further weight.

CAUTIONS

Jaundice: In the more than 14 million patients who have been treated with 'Thorazine' in the United States, the incidence of jaundice—regardless of indication, dosage, or mode of administration—has been low. Few cases have occurred in less than one week or after six weeks. Jaundice due to 'Thorazine' is of the so-called "obstructive" type; is without parenchymal damage; and is usually promptly reversible upon the withdrawal of 'Thorazine'. Because detailed liver function tests of 'Thorazine'-induced jaundice give a picture which mimics extrahepatic obstruction, exploratory laparotomy should be withheld until sufficient studies confirm extrahepatic obstruction.

Agranulocytosis: Agranulocytosis, although rare, has been reported in patients on 'Thorazine' therapy. Patients receiving 'Thorazine' should be observed regularly and asked to report at once the sudden appearance of sore throat or other signs of infection. If white blood counts and differential smears give an indication of cellular depression, the drug should be discontinued, and antibiotic and other suitable therapy should be instituted. Because most reported cases have occurred between the fourth and the tenth weeks of treatment, patients on prolonged therapy should be observed particularly during that period.

A moderate suppression of total white blood cells is sometimes observed in patients on 'Thorazine' therapy. If not accompanied by other symptoms, it is not an indication for discontinuing 'Thorazine'.

Potentiation: 'Thorazine' prolongs and intensifies the action of many central nervous system depressants, such as barbiturates and narcotics. Consequently, it is advisable to stop administration of such depressants before initiating 'Thorazine' therapy. Later the depressant agents may be reinstated, starting with low doses, and increasing according to response. Approximately ¼ to ½ the usual dosage of such agents is required when they are given in combination with 'Thorazine'. (However, 'Thorazine' does not potentiate the anticonvulsant action of barbiturates. In patients who are receiving anticonvulsants, the dosage of these agents—including barbiturates—should not be reduced if 'Thorazine' is started. Rather, 'Thorazine' should be started at a very low dosage and increased, if necessary.)

Hypotensive Effect: Postural hypotension and simple tachycardia may be noted in some patients. In these patients, momentary fainting and some dizziness are characteristic and usually occur shortly after the first parenteral dose, occasionally after a subsequent parenteral dose—very rarely after the first oral dose. In most cases, prompt recovery is spontaneous and all symptoms disappear within ½ to 2 hours with no subsequent ill effects. Occasionally, however, this hypotensive effect may be more severe and prolonged, producing a shock-like condition.

In consideration of possible hypotensive effects, the patient should be kept under observation (preferably lying down) for some time after the initial parenteral dose. If, on rare occasions, hypotension does occur, it can ordinarily be controlled by placing the patient in a recumbent position with head lowered and legs raised. If it is desirable to administer a vasoconstrictor, 'Levophed' and 'Neo-Synephrine'★ are the most suitable. Other pressor agents, including epinephrine, are not recommended because phenothiazine derivatives may reverse the usual elevating action of these agents and cause a further lowering of blood pressure.

Antiemetic Effect: The physician should always bear in mind that the antiemetic effect of 'Thorazine' may mask signs of overdosage of toxic drugs and may obscure diagnosis of conditions such as intestinal obstruction and brain tumor.

Dermatological Reactions: Dermatological reactions have been reported. Most have been of a mild urticarial type, suggesting allergic origin. Some of them appear to be due to photosensitivity, and it is advisable that patients on 'Thorazine' avoid undue exposure to the summer sun.

Neuromuscular Reactions: With very large doses of 'Thorazine', as frequently used in psychiatric cases over long periods, there have been a few patients who have exhibited neuromuscular reactions (extrapyramidal symptoms) which closely resemble parkinsonism. Such symptoms are reversible and usually disappear within a short time after the dosage has been decreased or the drug temporarily withdrawn. These neuromuscular reactions can also be controlled by the concomitant administration of standard antiparkinsonism agents.

Lactation: Moderate engorgement of the breast with lactation has been observed in female patients receiving very large doses of 'Thorazine'. This, however, is a transitory condition which disappears on reduction of dosage or withdrawal of the drug.

CONTRAINDICATIONS

In comatose states due to central nervous system depressants (alcohol, barbiturates, narcotics, etc.), and also in patients under the influence of large amounts of barbiturates or narcotics.

AVAILABLE

Tablets, 10 mg., 25 mg., 50 mg. and 100 mg., in bottles of 50, 500 and 5000; 200 mg., for use in mental hospitals, in bottles of 500 and 5000. (Each tablet contains chlorpromazine hydrochloride, 10 mg., 25 mg., 50 mg., 100 mg., or 200 mg.)

Ampuls, 1 cc. and 2 cc. (25 mg./cc.), in boxes of 6, 100 and 500. (Each cc. contains, in aqueous solution, chlorpromazine hydrochloride, 25 mg.; ascorbic acid, 2 mg.; sodium bisulfite, 1 mg.; sodium sulfite, 1 mg.; sodium chloride, 6 mg.)

Multiple-dose Vials, 10 cc. (25 mg./cc.), in boxes of 1, 20 and 100. (Each cc. contains, in aqueous solution, chlorpromazine hydrochloride, 25 mg.; ascorbic acid, 2 mg.; sodium bisulfite, 1 mg.; sodium sulfite, 1 mg.; sodium chloride, 1 mg. Contains benzyl alcohol, 2%, as preservative.)

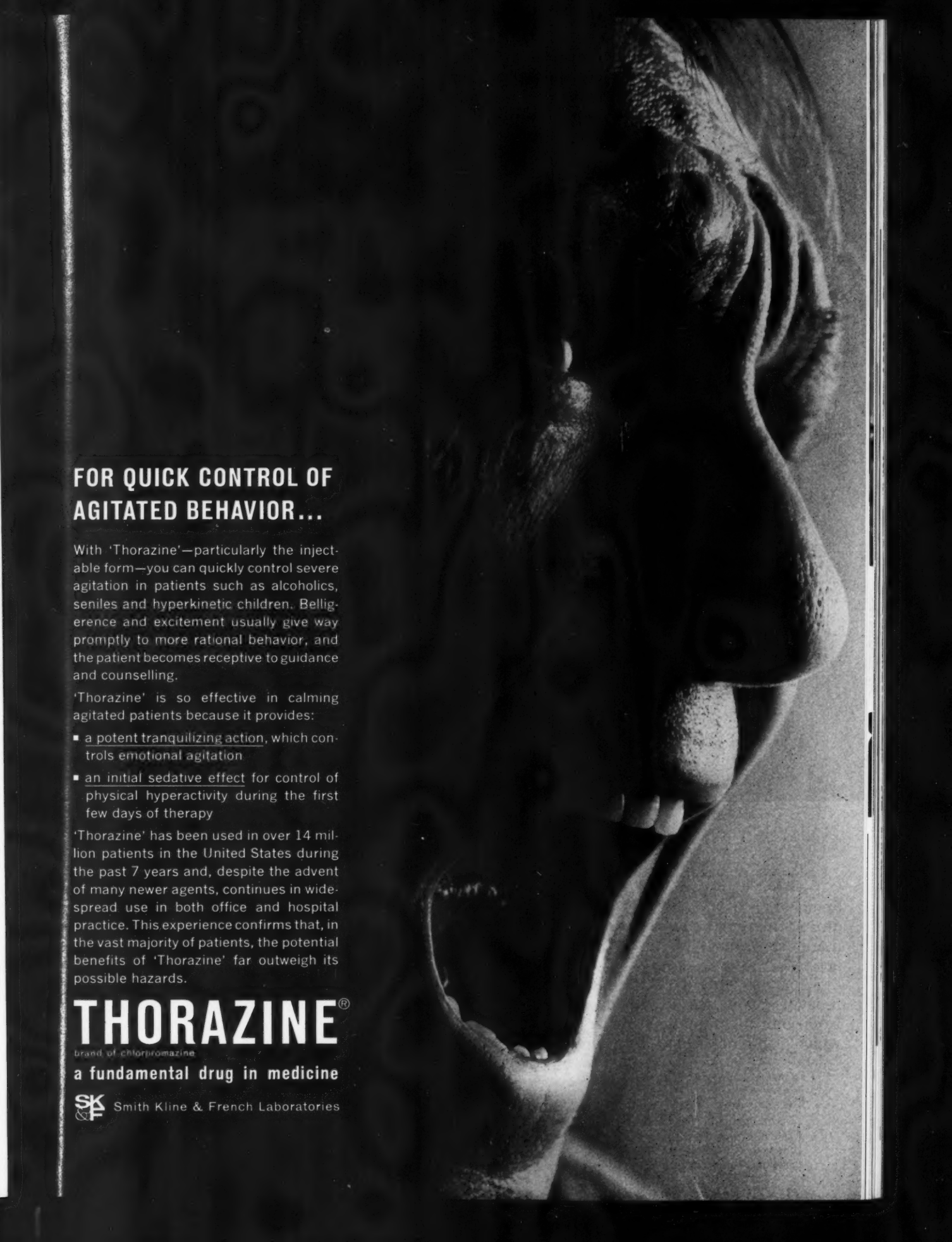
Spansule® capsules, 30 mg., 75 mg., 150 mg. and 200 mg., in bottles of 30, 250 and 1500; also 300 mg., in bottles of 30 and 1500. (Each 'Spansule' capsule contains chlorpromazine hydrochloride, 30 mg., 75 mg., 150 mg., 200 mg., or 300 mg.)

Syrup, 10 mg./teaspoonful (5 cc.), in 4 fl. oz. bottles. (Each 5 cc. contains chlorpromazine hydrochloride, 10 mg.)

Suppositories, 25 mg. and 100 mg., in boxes of 6. (Each suppository contains chlorpromazine, 25 mg. or 100 mg.; glycerin, glyceryl monopalmitate, glyceryl monostearate, hydrogenated cocoanut oil fatty acids, hydrogenated palm kernel oil fatty acids, lecithin.)

Concentrate (for hospital use), 30 mg./cc., in 4 fl. oz. bottles, packages of 12 and 36; and in 1 gal. bottles. (Each cc. contains chlorpromazine hydrochloride, 30 mg.)

★'Levophed' and 'Neo-Synephrine' are the trademarks (Reg. U.S. Pat. Off.) of Winthrop Laboratories for its brands of levarterenol and phenylephrine respectively.



FOR QUICK CONTROL OF AGITATED BEHAVIOR...

With 'Thorazine'—particularly the injectable form—you can quickly control severe agitation in patients such as alcoholics, seniles and hyperkinetic children. Belligerence and excitement usually give way promptly to more rational behavior, and the patient becomes receptive to guidance and counselling.

'Thorazine' is so effective in calming agitated patients because it provides:

- a potent tranquilizing action, which controls emotional agitation
- an initial sedative effect for control of physical hyperactivity during the first few days of therapy

'Thorazine' has been used in over 14 million patients in the United States during the past 7 years and, despite the advent of many newer agents, continues in widespread use in both office and hospital practice. This experience confirms that, in the vast majority of patients, the potential benefits of 'Thorazine' far outweigh its possible hazards.

THORAZINE®

brand of chlorpromazine

a fundamental drug in medicine

SK&F Smith Kline & French Laboratories

Now control arthritic flare-ups with far less steroid

With Somacort to relax muscles and relieve pain, tender joints need less steroid to reduce inflammation

Somacort is a safe, logical step-up in treatment during the rough days when your patients need more than salicylates to keep comfortable and active.

Soma, by itself, benefits many arthritics by relieving the muscle spasm and pain which arise from joint inflammation[1]. Thus with Somacort, which combines Soma with prednisolone, the amount of steroid needed to control inflammation can be kept within more conservative limits.

Somacort is well tolerated even when used for long-term therapy in more serious cases.

1. Wein, A. B.; The Use of Carisoprodol (Soma) in Orthopedic Surgery and Rehabilitation, Miller, James G., ed., Wayne State University Press. Detroit, Michigan, 1959.

Recommended dosage: 1 or 2 tablets q.i.d. (Each tablet contains 350 mg. carisoprodol, 2mg. prednisolone)

SOMACORT®

(carisoprodol, Wallace, with prednisolone)

Wallace Laboratories, Cranbury, New Jersey

Water and society*

Abel Wolman, Dr.Eng.†

In the United States, blessed with reasonably comprehensive water services, the public health implications of water supply have become less and less dramatic because of the almost total elimination of the familiar waterborne diseases of the early 20th century. The disappearance of typhoid fever and other enteric diseases in much of the Western World has resulted in a declining interest of most health workers in the field of water supply.

In this favorable environment, however, the provision of water service in expanding urban areas remains one of the major problems of society. So accustomed have our citizens become to unlimited amounts of excellent quality water that they assume, from past experience, that their requests for this service will be met automatically by private and public enterprise. This assumption, however, is not supported by the results. In some parts of the Western World, due to natural causes and to unprecedented urbanization, rationing of water is almost universal and continuous.

When we move out of the Western World the situation has few favorable characteristics. More than three-quarters of the total population of the world lacks true community water service and few have water of high quality. Comprehensive communal water systems which either reach into the house or are adjacent to the place of living are virtually unknown in vast areas. The consequent toll in waterborne disease is characteristic of western experience in the late 19th century.

RESOURCES IN SELECTED AREAS

In the United States in 1954, the total withdrawals from streamflow for irrigation, mining, manufacturing, steam electric power, and municipal water supplies was somewhat over 300 billion gallons per day. By 1980 this amount will approach some 560 billion gallons per day.

Before these astronomical figures cause too much alarm it should be emphasized that, with the exception of irrigation uses, a large part of these withdrawals are returned to the streams. A more informative set of figures, therefore, would indicate that the actual consumption of water will rise in the United States, from 110 billion gallons per day in 1954 to 120 billion in 1980. It is heartening to remember also that in these 2 years consumption represents only some 10 to 11 per cent of the average streamflows.

Water availability is a function of place, time, and climate. Average figures obviously do not disclose that some areas of the United States will encounter water difficulties earlier and to a greater degree than others. It is extremely doubtful, however, that scarcity of water, at least in the United States, will impose a serious restriction on growth now or in the remote future.

Greater attention to the art of management of water resources is increasingly in prospect, simply because the ease and accessibility of development will decrease while costs increase.

Even in the United States, health officials must return to a daily detailed interest and responsibility for water service, because no other group is likely to make itself responsible for water requirements of communities. Historically, the health officer dominated this area of development, initially for public health reasons and later by virtue of experience in the planning of community water facilities. He must resume this responsibility.

When one turns from the United States, the assessment of water service becomes relatively bleak.

In Central and South America some 100 million people do not have water service at their homes. At the rate at

*Reprinted from *Public Health Reports*, April 1961.

†Dr. Wolman is professor of sanitary engineering, emeritus, at Johns Hopkins University, Baltimore. This paper was presented at the Seventh Annual Meeting of the American College of Preventive Medicine in San Francisco, November 1960.

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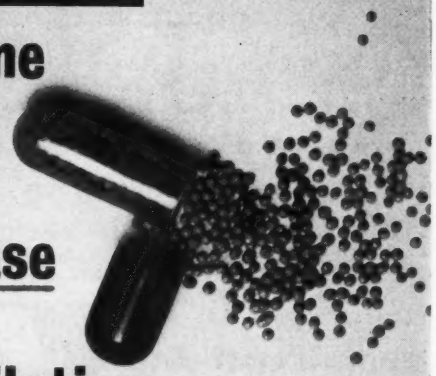

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REFERENCES: (1) Coon, W. W.; Wolfman, E. F., Jr.; Foote, J. A., & Hodgson, P. E.: Am. J. Surg. 98:4, 1959. (2) Friedman, E. A.; Little, W. A., & Sachtleben, M. R.: Am. J. Obst. & Gynec. 79:474, 1960. (3) Margulis, R. R., & Brush, B. E.: Arch. Surg. 65:511, 1952. (4) Personal Communications to the Department of Clinical Investigation, Parke, Davis & Company, 1959.

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which new water facilities are being built, they will neither meet the enormous backlog of deficiency nor even keep pace with the annual increase in population. Since 1950, for example, an additional 21 million people have been supplied with water, while the population has simultaneously increased by 30 million. If this trend should continue until 1980, probably over 150 million people will lack adequate water services in that year. In these and in many other countries water service not only lags behind population increase, but with each passing year their governments fall further and further behind in installations.

The problem is intensified by the worldwide phenomena of urbanization and industrialization, which subject more and more people to conditions of living far more hazardous than those which prevailed in scattered rural areas. Venezuela is an interesting example of this international trend. In 1943 some 23 per cent of the population of this country lived in concentrations of 5,000 inhabitants or more. In 1959 the figure had risen to 62 per cent, and by 1980 it undoubtedly will exceed 70 per cent. The percentage of population in Venezuela without water facilities, in aggregates of 5,000 or more, has now reached 50. Unless construction is very much greater than is now indicated, the population without water in 1980 may far exceed 50 per cent for the urban areas.

Emphasis on development in urban areas is justified only because faster progress is possible and a greater coverage of people may result from a minimum of effort. That one cannot neglect smaller communities and strictly rural areas, because of political and humanitarian reasons, is a foregone conclusion. The magnitude of the water problems in these areas staggers the imagination.

Mexico is a case in point. That country has 24 communities of over 50,000 population; 135 of 10,000 to 50,000, and 824 of 2 500 to 10,000. The number of communities of less than 2,500 is 97,607. Exclusive attention to these small aggregates, as is the case in many countries, undoubtedly will require 75 to 100 years with a net benefit to only a small part of the total population.

Water service in the Near, Middle, and Far East is generally characterized by inadequate quantity, unsatisfactory quality, discontinuity of service, and inaccessibility to many houses, usually those of the poor.

In India the Government has made valiant efforts since 1954 to provide water supply and sanitary facilities. Its progress though significant is still disheartening. In its rural schemes it had provided facilities by 1960 to only a small fraction of the vast total number of villages awaiting service. In urban areas it has provided aid in hundreds of enterprises. The total expenditures, however, for both rural and urban water supply and sanitation projects is pathetically small in comparison with the enormous backlog of necessities and the rapid growth of population.

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IMPLICATIONS OF WATER AVAILABILITY

For years the sanitarian has emphasized both in thought and in action the high significance of the quality of water for the protection of man. Aside from a few countries, this philosophy has taken the turn of attempting to provide water in tiny quantities, but of good quality, at least at its origin. This action rested upon the sound, but limited, assumption that drops of good water would have high impact upon disease. Many of the hopes in such a philosophy have not materialized. Something more than good quality is essential to the preservation of health. To most fieldworkers it has become equally clear that several liters of water carried from some central point to a place of domiciliary use and storage all too often results in a quality deterioration at the home. The assumption that water of good quality at the source is synonymous with water of good quality at the point of human intake is not borne out by studies of actual household practice.

In addition, it is increasingly clear that disease is related to water quantity nearly as much as it is to water quality. It is an insult to people to preach body cleanliness and a clean home, when they must carry water over long distances and at great sacrifices of time and energy. To ask an individual to maintain total cleanliness, while at the same time failing to provide adequate water quantities, hardly

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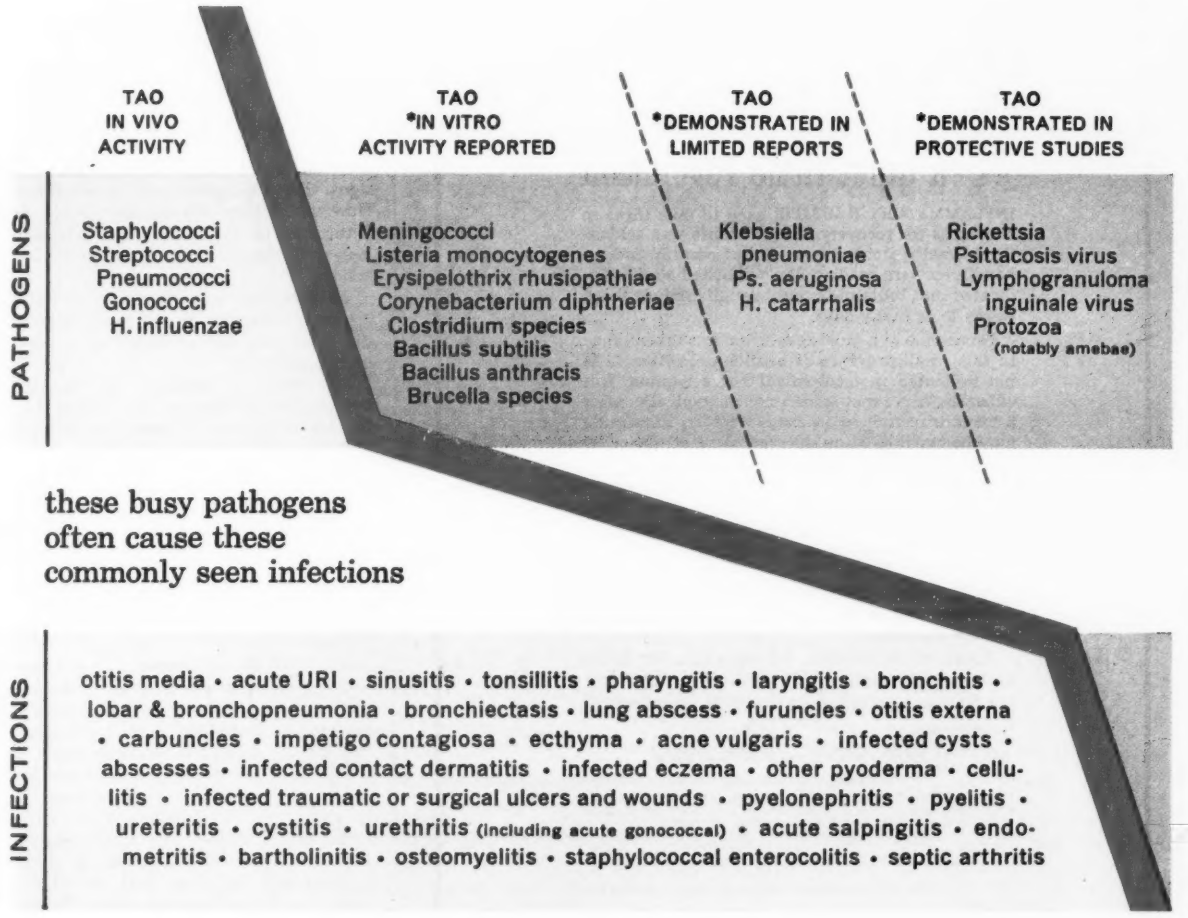

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PROTAMIDE®—an exclusive colloidal solution of processed and denatured enzyme—is *not* foreign protein therapy.

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1. Baker, A. G.: Penn. Med. J. 63:697 (May) 1960. 2. Sforzolini, G. S.: Arch. Ophthal. 62:381 (Sept.) 1959. 3. Smith, R. T.: Med. Clin. N. Amer. (Mar.) 1957. 4. Lehrer, H. W.; Lehrer, H. G., and Lehrer, D. R.: Northw. Med. (Nov.) 1955.

falls within the realm of sound public health education.

Much of the world is plagued by diseases in which water of poor quality plays a significant part. The diarrheal diseases of infants, young children, and adolescents are still the major cause of morbidity and mortality. More than 25 per cent of the hospital beds of the world are estimated to be occupied by people ill because of poor water.

In many urban areas in Asia, cholera incidence would be materially reduced by the provision of safe and adequate water to many of the poverty stricken sections which are densely populated and continuously exposed to contaminated waters. In the Calcutta region, generally accepted as one of the major endemic foci of cholera in Asia, life in the bustees is a daily invitation to transmission of cholera and of other waterborne diseases. Significant reduction of these waterborne diseases awaits the provision of an ample quantity of safe water, close to the houses, in order to place cleanliness within the grasp of people.

There is good reason to believe that the persistence of typhoid fever, trachoma, yaws, bilharziasis, and other diseases is significantly related to the nonavailability of safe water in ample quantity.

Dr. C. J. Hackett, the medical officer in charge of venereal diseases and treponematoses of the World Health Organization Headquarters, made the pertinent comment, "It is at least suggestive that one of the main factors reducing yaws prevalence may be more water and more soap.

"A great reduction in the prevalence of yaws not attributable to a mass treatment campaign is usually accompanied by other changes that have contributed to the raising of the standard of living. The more obvious of these are more and better clothing; more bicycles on the roads; more village schools and more secondary school places; more dams, boreholes, and wells available and in use; and more soap—all of which are signs that the community is wealthier. However, village houses may be in no better state of repair, and excreta disposal may still remain a matter of individual action."

This disease, as so many other water "related" diseases, tends to decline as the total standard of living of a community rises.

The renewed emphasis on personal hygiene brings to mind the insistence of the late Professor Winslow on the importance of this factor in the transmission of many communicable diseases.

We have perhaps not yet scratched the surface of the significance of personal hygiene in relation to many of the diseases of modern society. In Louisiana, the transmission of poliomyelitis from vaccinated persons to household contacts was much more frequent in low socioeconomic groups than among those in which hygiene was better (51 per cent of household contacts infected in the low socioeconomic group compared with 8 per cent in the latter). A similar observation on the poliovirus has been made in the Belgian Congo, where overcrowding and poor hygiene favor the passage of the virus from one child to another. These situations of course, are highly complicated, both in the understanding of the behavior of the virus and in relating environment to these phenomena. In fact, under certain conditions, paradoxes arise between cleanliness, low-level hygiene, and poliomyelitis.

Recently in England, Dr. A. Leslie Banks commented on the relationship of cleanliness to incidence of dermatoses. His article, "Ecology in Relation to Dermatology," presents one of the few attempts to trace the history of skin diseases over the last 100 years or more. His observation is pertinent to a discussion on water-related diseases: "Indeed it is difficult to see how a healthy skin could be maintained in the absence of facilities for cleanliness and well-being." He gives as interesting examples the great decline in England of cases of impetigo and of verminous school children. In 1908 approximately one-half of the girls in urban areas were verminous; in rural areas about one-quarter. In 1951 this figure had dropped to 6 per cent of the entire school population. The experience with ringworm was similar. In the early years of the school medical service ringworm was one of its greatest problems. In 1951 only 2,365 school children in England and Wales had ringworm of the scalp. The incidence of scabies in school chil-

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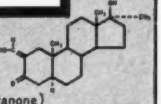

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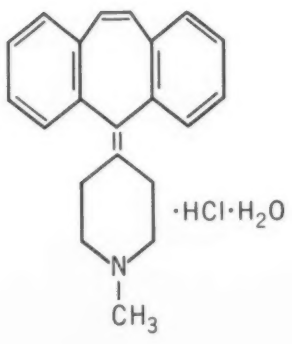

CHEMISTRY

PERIACTIN hydrochloride cyproheptadine hydrochloride is a white, crystalline solid, soluble in water to the extent of about 4 mg. per cc. It is the hydrochloride monohydrate of 1-methyl-4-(5-dibenzo-[a, e]-cycloheptatrienylidene)-piperidine. The empirical formula is $C_{21}H_{21}N \cdot HCl \cdot H_2O$ and the structural formula is as shown on the left.

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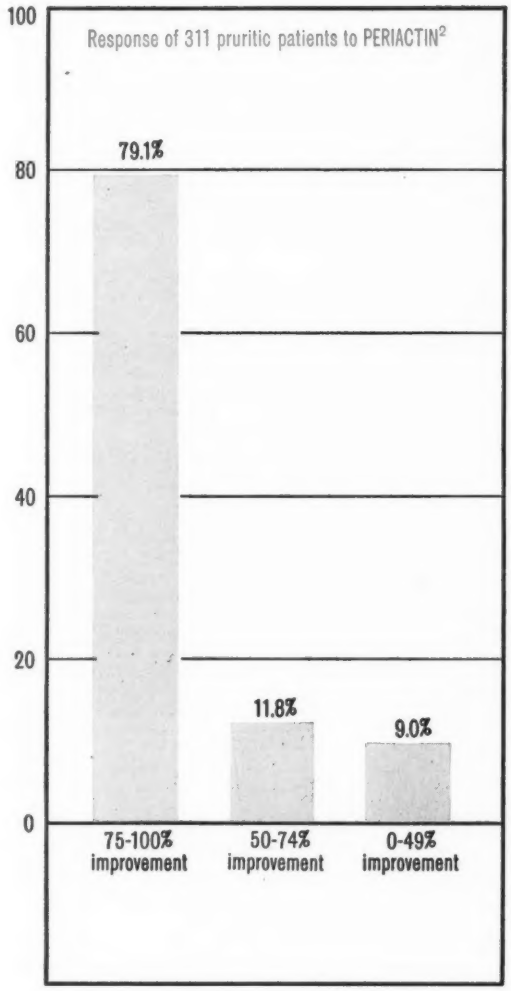

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• Although histamine release is an important aspect of allergic manifestation in man, the effects of this substance do not account adequately for many of the allergic reactions observed. Cyproheptadine has been shown to have some antiallergic properties that are in addition to those demonstrated by compounds with only antihistamine activity.

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• PERIACTIN has an interesting pharmacologic profile, in that its activity as a serotonin and histamine antagonist is comparable to the individually most active known substances with such activity.

• Not a phenothiazine. Clinical experience with more than 4,000 patients. Clinical reports have not indicated evidence of jaundice, agranulocytosis, parkinsonism.

• Has a high order of antipruritic activity in pruritus associated with such conditions as: angioneurotic edema, urticaria, dermatitis, neurodermatitis, neurodermatitis circumscripta, eczema, eczematoid dermatitis, drug reactions, poison ivy, neurotic excoriations, sunburn, chickenpox, insect bites, pruritus ani and vulvae.[5-16]

References: 1. Kalz, F., and Fekete, Z.: Studies on capillary permeability using coomassie blue as indicator, J. Invest. Dermat. 36:37, Jan. 1961, Supplemented by personal communication. 2. Welsh, A. L., and Ede, M.: Efficacy of cyproheptadine as an antipruritic agent, a preliminary report, J. New Drugs 1:22, Jan.-Feb. 1961.

*A blue dye was given intravenously to visualize leakage of plasma proteins resulting from increased vascular permeability caused by the test substances.

See next page for more detailed information on PERIACTIN

Additional Information on PERIACTIN

PERIACTIN hydrochloride cyproheptadine hydrochloride is a serotonin and histamine antagonist recommended primarily for the treatment of the pruritic dermatoses.

PERIACTIN is not a phenothiazine, does not contain sulfur or nitrogen in the tricyclic ring system, and clinical reports do not indicate any evidence of parkinsonism, dystonia, agranulocytosis, or jaundice connected with its use.

Dosage

Dosage must be individualized. The therapeutic range is 4 to 20 mg. a day, with the majority of patients requiring 12 to 16 mg. a day. An occasional patient may require as much as 32 mg. a day for adequate relief. It is suggested that dosage be initiated with 4 mg. three or four times a day and adjusted according to the size and response of the patient.

The dosage for children between the ages of 2 and 14 years is 6 to 16 mg. a day depending upon the size and response of the patient. The initial dosage is usually 2 mg. three or four times a day.

Since the effect of a single dose usually lasts four to six hours, the daily requirement should be given in divided doses three or four times a day or as often as necessary to provide continuous relief.

Precautions

The only side effect that appears frequently is drowsiness. Many patients who initially complain of drowsiness may no longer do so after the first three or four days of continuous administration. Drowsiness is often a desirable effect in patients with dermatitis and pruritus, since it tends to raise the threshold of perception and may decrease emotional tension caused by the disease.

Patients who become drowsy on PERIACTIN should be cautioned against driving a car or operating machinery or appliances requiring alert attention.

Dry mouth, dizziness, jitteriness, nausea, and skin rash have been reported in low incidence.

How Supplied

Tablets PERIACTIN hydrochloride cyproheptadine hydrochloride are supplied in bottles of 100. Each scored tablet contains 4 mg. of cyproheptadine hydrochloride.

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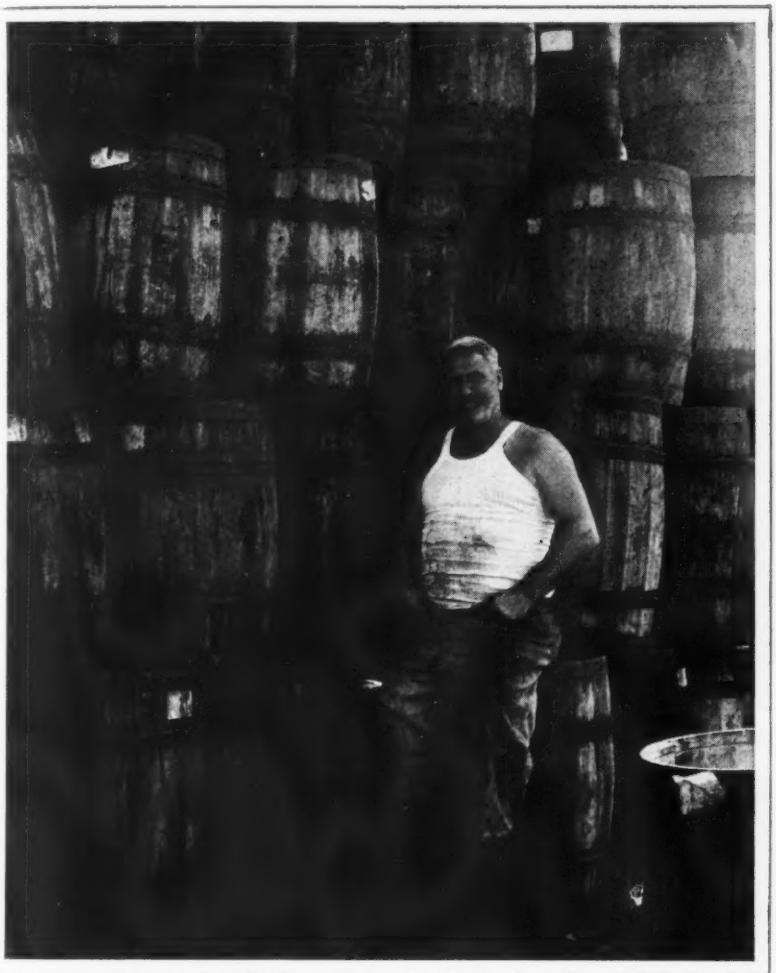

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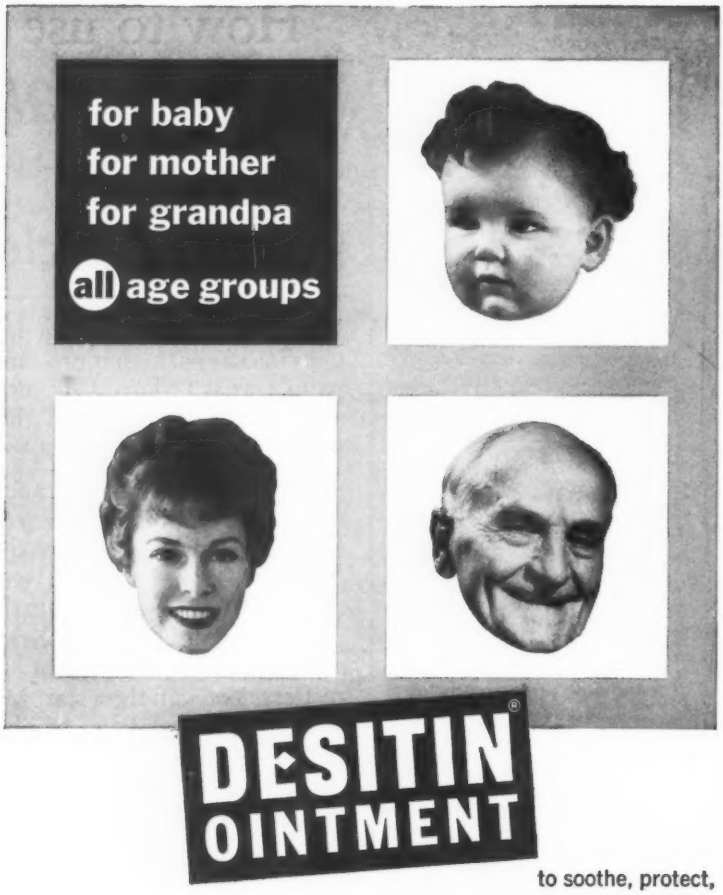

dren had declined from 38,000 cases in 1947 to 4,723 in 1951.

In many of the environmental diseases it is, of course, true that measures other than the provision of water are jointly essential. For many of the intestinal diseases of the world multiple preventive measures would be productive. Mass treatment campaigns with modern atoxic anthelmintic products are indicated. Unfortunately, their success requires repetitive programs. If these are unaccompanied by opportunities for detailed personal cleanliness and broad hygienic living, their repetitive character becomes both permanent and costly.

Many of these considerations are strangely reminiscent of the Mills-Reinke phenomena noted in the early 20th century, when these investigators attributed to improved water service a decline in water-associated, not true waterborne, diseases. Probably the phenomena which they were statistically measuring were those reflecting the opportunities for cleanliness and personal hygiene resulting from ample quantities of safe water.

So far little or no comment has been made on the high significance of water availability in relation to factors other than frank disease. In an era of rapid urbanization and industrialization, both in developed and developing countries, water must play a dominant part. The documentation of the economic impact of water is just being initiated. Such a record is desirable, if for no other reason than to justify the advantages of providing water for expanding populations, whereby vital commerce and industry may progress. Whether privately obtained or publicly developed, most modern industry requires water and in some instances of increasingly higher quality than that provided for human consumption. This trend will be intensified as the complexity and competitive character of manufacturing proceed. Even in a heavy industry such as steel-making, a high quality of water is increasingly required. This demand has long been met by the synthetic rubber, the synthetic fiber, and the organic chemical industries.

The bare physiological requirements for water have profound significance in space technology, in general military problems, and under the most severe conditions of life in desert areas, but this minimum amount in liters will no longer satisfy the communities with which the practitioner must now deal. Planning water systems for people will not be based on the limited assumptions of the late 19th and early 20th centuries of 6 to 10 gallons per capita per day. Such meager provision ignores the effects and the requirements of urban and industrial life and the necessities of total cleanliness. It is unrealistic for the water needs of 1970 and 1980.

In the United States the requirement for industry and commerce in communities of over 10,000 people is generally more than half of the total water consumption. Furthermore, the amount of water essential for firefighting purposes in many instances dominates the size and cost of American water systems.

Where such a system amply provides for fire protection, the savings in annual fire insurance rates often are equal to the interest and amortization of the bond issue for constructing the facility. This fact is a more impressive argument for the installation of a public water system than is inherent in the prevention of disease. The monetary values are easily demonstrable and hence profoundly convincing to authorities and to citizens.

Too often, in many developing countries, housing projects have remained empty or have not been constructed and agricultural development has been delayed because of serious water deficiency.

These observations might be elaborated tenfold if time were afforded. They all point, however, to the fact that, without water, civilization dies. The late limnologist, Dr. August Thienemann, aptly phrased the theme of this paper in these terms: "Ohne Wasser, Kein Leben; Ohne Wasser, Keine Kulture."

FINANCIAL ASPECTS

If every country in the world is or will be confronted with the necessity of providing water, the problem of how to proceed at once confronts the practitioner. The provision of water on any community basis, with even the most modest design and construction criteria, requires money. The money inherent in such systems looms large in terms of capital invest-

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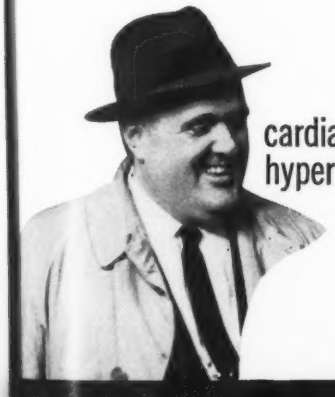

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ment. Without burdening this paper with detailed estimates, it may be said that these requirements for money on a worldwide basis will run into many billions of dollars. This one fact staggers the health official, accustomed to annual budgets of relatively small and intelligible amounts.

It is of great importance, therefore, to stress the fact that large amounts of capital money for the purposes discussed here will be relatively small amounts on a per capita basis and still smaller on the basis of annual charges.

No major capital investment would be made in any country for any purpose if the amount were to be repaid in a single year. In functions other than water supply the man on the street is unaware of the investment required. When he enters a bus he does not mentally conjure up the cost of the bus or of the total transport system. When he turns on his electric bulb he is equally unaware of these facts. In community water systems, however, the first item which startles the official, as well as the private individual, is the amount of capital required to construct a system.

Part of this psychological response is due to the practice of constructing systems by central government grants or loans, or international gifts where the amounts are repayable in 5 years or less. These practices have resulted in excessive emphasis upon the initial capital investment, with little or no consideration of repayment on the basis of annual fixed charges over a minimum period of some 20 to 25 years. Persistent emphasis on initial investment will continue as long as central government remains the financial source for increasing numbers of public functions. In one such country 25 years ago, only 3 activities were dominantly supported by the central government; almost 30 functions receive support at present.

One of the first efforts, therefore, should be to develop the fiscal programming on a sound, self-supporting basis, with long-term repayment of capital costs by annual charges against the water user. If and when such principles are adopted, financing of water systems enters the open market with all of the advantages which accrue from such sources of money.

In the United States some 19,000 public water systems have been financed throughout their history on a self-supporting basis. They supply over 125 million people. Without such responsible local financing this result could never have been obtained.

The lessons from this experience of almost 100 years must be adapted to other countries, so universally tied to central government largesse. These adaptations, of course, should be made in the light of the political structures, the cultural history, and the economic practices of the countries concerned. Cultural resistance to a modification of a "free water" concept is frequently suggested as a reason for retarded progress. This is contradictory to the many departures from such principles now successfully operating in almost every country of the world. Almost without exception, these successful departures in utility financing have been due to the high imagination and the courage of the citizens who recognized the obstacles inherent in history and hurdled them by the introduction of new practical and flexible schemes of finance.

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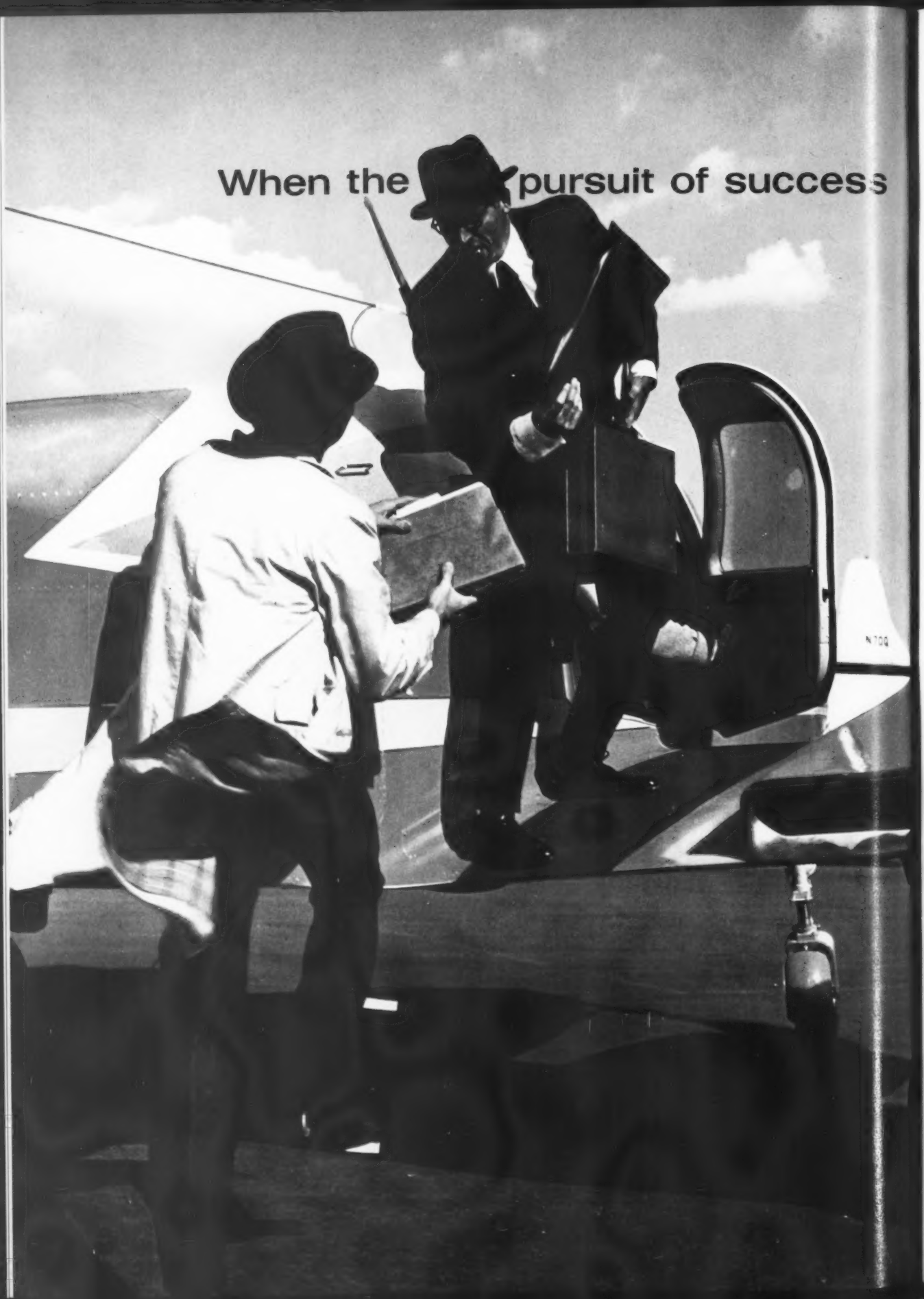
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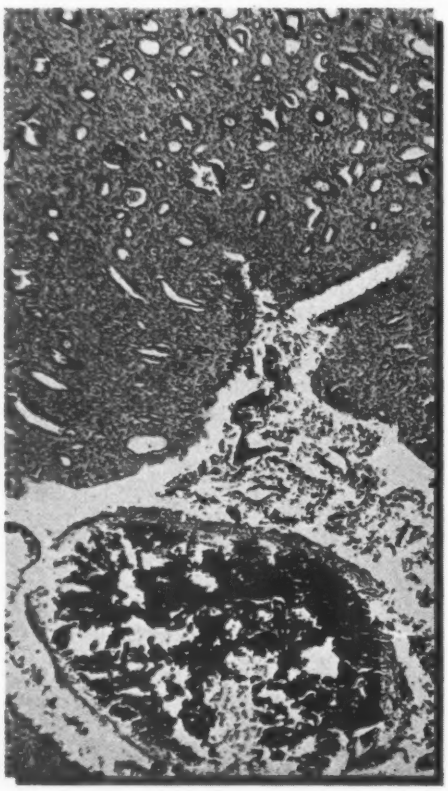
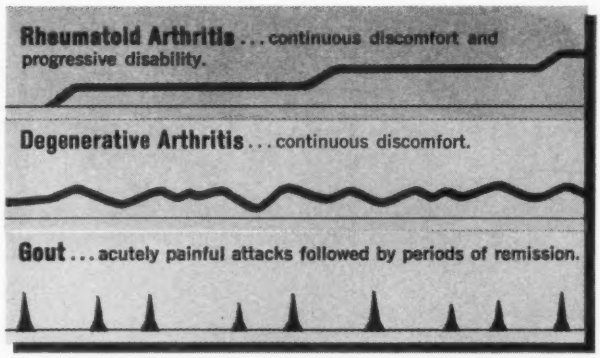
Kidney impairment, with varying degrees of hypertension and arteriosclerosis, is the critical complication of gout. "From 30 to 50 per cent of gouty patients are said to die of renal disease."[2]

Tophus in the calyx, surrounded by fibrinoid exudate and detached mucosal epithelium.[3]



The mid- and outer portion of the pyramid with typical uric acid crystals in the collecting system.[3]

AIDS TO DIAGNOSIS


Rheumatoid Arthritis... continuous discomfort and progressive disability.
Degenerative Arthritis... continuous discomfort.
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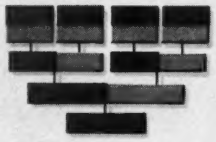

"If a family history of gout is obtained, even though it is one or two generations removed, this information is significant."[4]

"The metatarsophalangeal joint of a great toe is affected early or repeatedly in some cases, rarely or never in others."[6]

"All patients complaining of non-traumatic musculoskeletal discomfort should have at least one serum uric acid determination."[5]

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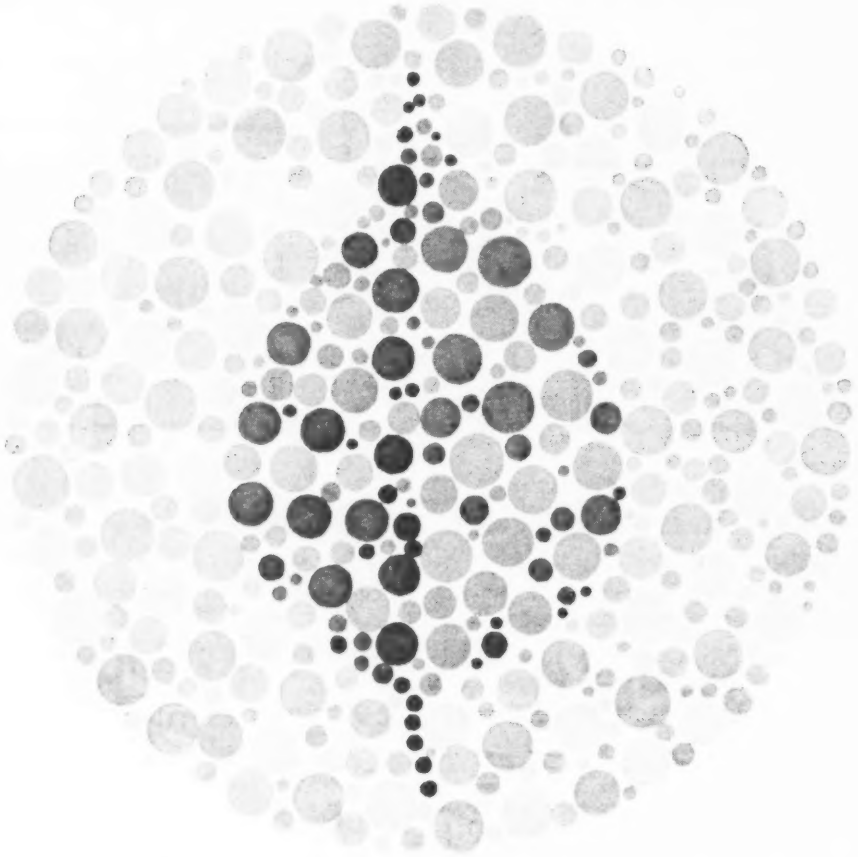

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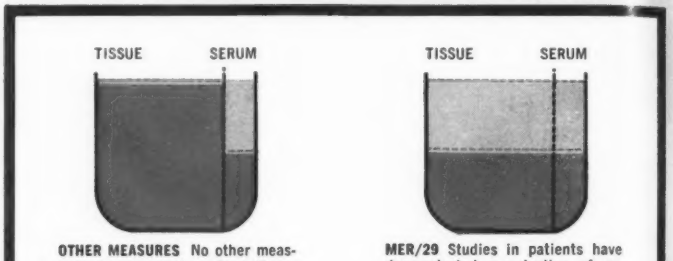
We know that MER/29 does this by inhibiting the body's own production of cholesterol.

We know that its use in over 300,000 patients reaffirms the safety margins established in early laboratory and clinical data.



OTHER MEASURES No other measures are proven to reduce tissue cholesterol even in the face of serum cholesterol reduction.

MER/29 Studies in patients have demonstrated a reduction of approximately 40% of **tissue** cholesterol, as well as a significant reduction of the **total** sterol pool.

effect on
body pool of cholesterol

WE KNOW THE BENEFITS OF MER/29

We know that, in some patients, concurrent clinical benefits attend the use of MER/29. Published papers on MER/29 therapy to date report improvement in 50 of the 79 anginal patients reported in these studies, and comparable results are being obtained in similar studies now in progress. Among the other benefits reported are:

decreased incidence and severity of anginal attacks

improved* ECG *patterns

diminished nitroglycerin dependence

increased sense of well-being

"During triparanol [MER/29] therapy there was a definite improvement in the electrocardiographic tracings in response to exercise in 3 of 11 subjects with angina pectoris." —*Hollander, W.*, et al.: *J.A.M.A.* 174:*5 (Sept. 3) 1960.*

"Nitroglycerine requirements decreased in 3 [of 5 outpatient] patients, including the patient showing electrocardiographic improvement....Three [of 4 private male patients], after a lapse of some weeks, showed improvement in exercise electrocardiograms, which was sustained but not further improved in subsequent observations." —*Corcoran, A. C.*, et al.: *Progr. Cardiovasc. Dis.* 2*: (Pt.1) 576 (May) 1960.*

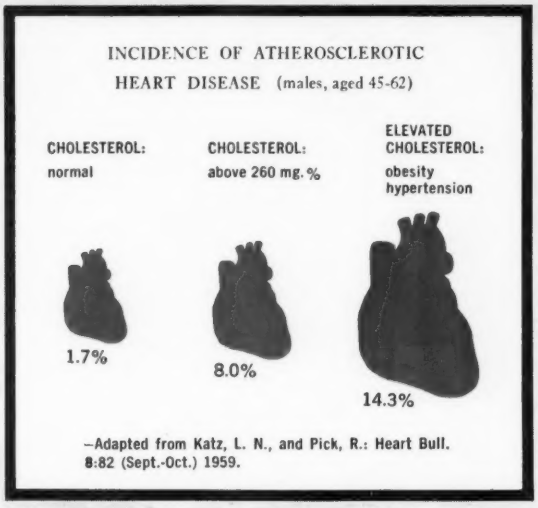
"Of the 45 patients with coronary artery disease followed for 1 year, 16 had a history of frequent anginal attacks. Fourteen of these spontaneously stated that their angina disappeared within 2 months of [MER/29] therapy....In one patient...with persistent coronary insufficiency pattern (ST segment depressions in multiple leads), there was a complete reversion to a normal tracing during MER/29 therapy with associated clinical improvement in angina." —*Lisan, P.: Progr. Cardiovasc. Dis.* 2*: (Pt. 1) 618 (May) 1960.*

. . . . what we are learning about atherosclerosis

WHY MER/29 MAY FAVORABLY ALTER ATHEROSCLEROSIS

"It has become generally accepted that elevated blood cholesterol or lipid, if sustained long enough, leads to early atherosclerosis."
–Page, I. H.: Mod. Med. 29:71 (Mar. 20) 1961.

Epidemiologic studies show that low cholesterol levels are associated with low incidence of atherosclerosis and coronary artery disease. On the basis of such studies, Stamler has said: "...a 15 to 20 per cent reduction in mean serum cholesterol levels alone might be associated with a 25 to 50 per cent reduction in coronary disease incidence rates in middle-aged men."
–Stamler, J.: Am. J. Pub. Health 50:(Pt. 2) 14 (Mar.) 1960.



–Adapted from Katz, L. N., and Pick, R.: Heart Bull. 8:82 (Sept.-Oct.) 1959.

THE DECISION FACING THE PHYSICIAN

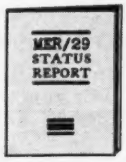
Despite our knowledge of the action, benefits and safety of MER/29, much remains to be discovered about the basic concept of cholesterol-lowering therapy. In this, MER/29 is comparable to the well-accepted use of antihypertensive agents: we know they lower blood pressure, but we cannot prove that lowering blood pressure will also lower morbidity or mortality. Yet few physicians hesitate to use these agents. The possible good is too great to ignore.

So it is with MER/29. No one can yet be certain that sustained, effective lowering of total body sterols will prevent or alter atherosclerosis. But the current evidence strongly supports this concept.

Perhaps that's why a growing number of physicians are now prescribing MER/29. They wish to assure their hypercholesterolemic, coronary artery disease, and atherosclerotic patients this reasonable hope.

It is a decision facing every physician.

Complete bibliography and prescription information on request.



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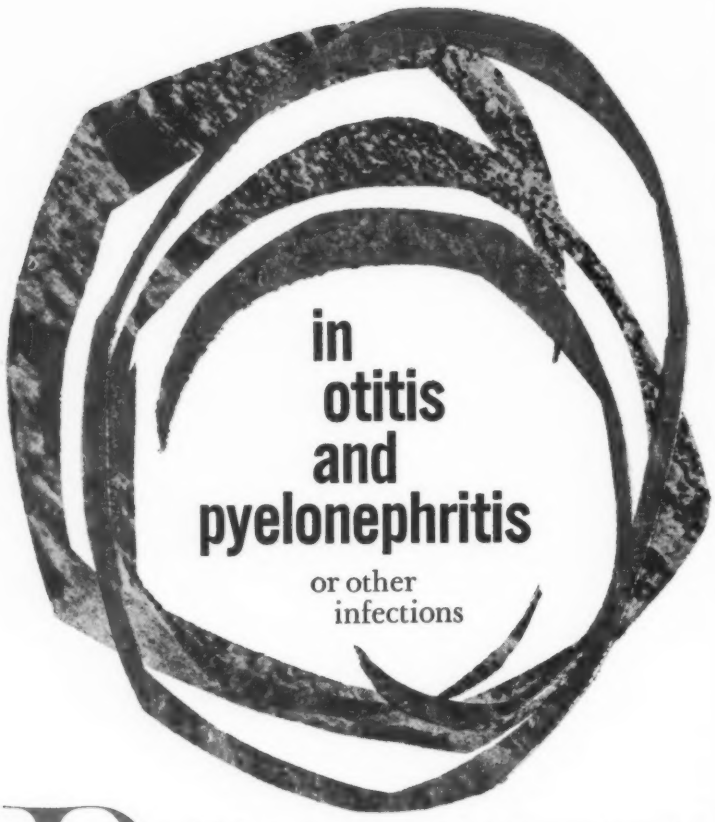

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is more frequent with increased age.

Within the past decade the public health significance of the early detection of glaucoma has been recognized. Screening programs among the general population have been reported from many communities,[1-9] but most of these programs were of a "one-shot" nature. The Brookline, Mass., program, however, is a regularly scheduled activity.

The Brookline glaucoma screening program was born in April 1957 at a meeting of the Sub-Council on Health of the Brookline Community Council. At this meeting representatives of the Lions Club said they were looking for ways in which they could help develop an effective community sightsaving program. The Brookline Health Department suggested to the Lions Club that a jointly operated glaucoma screening program might be the answer. After several meetings and exploration of what others had done, such a program was agreed upon.

There were three major reasons why glaucoma screening was selected. First the town of Brookline has an unusually high proportion of older people. Approximately 29,000 residents, or 52 per cent, are age 40 or older, and more than 7,500, or 14 per cent, are 65 years or older. Actually, there are more people over age 65 in Brookline than there are children in its public schools. Second, the health department was concerned that it was expending most of its energies on programs for children despite the fact that the aged represented a larger proportion of the population. A third factor which influenced the selection of a glaucoma screening program was the existence of a new health center which was centrally located and well equipped to carry out a variety of public health programs.

The joint sponsors met frequently to work out the details. It was agreed that the Lions Club and health department would share the costs. The Lions Club would pay for additional professional personnel, new equipment, and expensive promotional costs, and also provide nonmedical volunteers. The health department would handle routine expenses such as educational materials, records, medical supplies, and publicity, plus administrative, nursing, and custodial services. It would take full responsibility for followup.

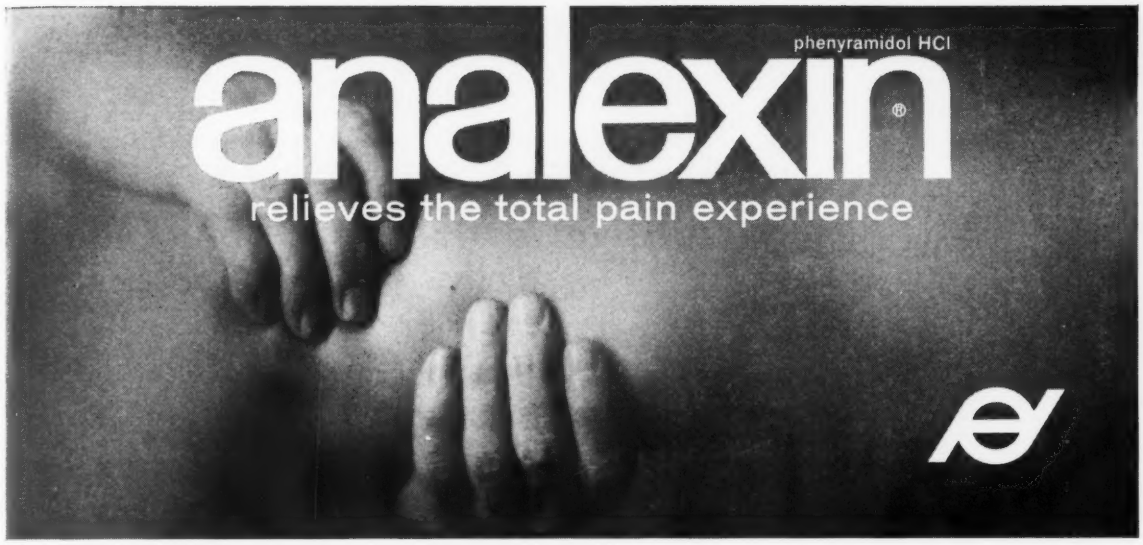
The decision to sponsor a sustained program, featuring smaller regularly scheduled clinics rather than one massive clinic, was made at this time. All concerned felt that the mechanics of followup of suspicious cases would be much more effective in the sustained program. In a clinic of 100 patients, 3 to 5 referrals for possible glaucoma could be anticipated, while in a clinic screening 2,000 individuals, 60 to 100 patients would require referral. The effectiveness of followup of the smaller caseload is obvious. The sponsors believed that at the end of a year the total number of patients screened would equal that of a massive "crash" program.

A formal letter was sent to the local medical society asking approval of the program and appointment of a representative to serve on a technical advisory committee. The society endorsed the program and expressed its appreciation for having been consulted early in the planning stages.

A technical advisory committee was established, consisting of the chiefs, or their delegates, of the eye services of the three teaching hospitals in the Boston area. Also on the committee were representatives of the Massachusetts Division of the Blind and the Massachusetts Department of Public Health. The Lions Club was represented by an ophthalmologist and an optometrist, as well as by the lay officers of the club. The health department was represented by its director and its health educator.

PROCEDURES AND STANDARDS

The functions of this committee were to set the technical procedures and to determine the ethical standards for the operation of the clinic. A number of difficult questions had to be answered. The most difficult, by far, was that of defining the proper relationship between the ophthalmologists and the optometrists working in the clinic. Fortunately, the chairman



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CONDITION pain associated with:	No. of patients	Relief	Slight or no relief
genitourinary conditions[1]	3	3	
gall bladder colic[1]	5	2	3
abdominal pain[1]	10	6	4
epigastric pain[1]	10	7	3
premenstrual tension headache[6]	50	40	10
postpartum pain[6]	100	100	
dysmenorrhea[6,7]	106	96	10
myositis, myalgia and tendinitis[7]	27	23	4
osteoarthritis[7]	82	62	20
rheumatoid arthritis[7]	38	23	15
arthralgia[7]	15	9	6
pelvic pain (chronic P.I.D., endometriosis, etc.)[7]	12	8	4
acute, chronic and traumatic musculoskeletal disorders[7]	33	28	5
Totals	491	407	84

*Generically designated as phenyramidol HCl in clinical trials.

1. Batterman, R. C.: Ann. New York Acad. Sc. *86*:203, 1960. 2. O'Dell, T. B.: Ann. New York Acad. Sc. *86*:191, 1960. 3. O'Dell, T. B., *et al.*: J. Pharmacol. & Exper. Therap. *128*:65, 1960. 4. O'Dell, T. B., *et al.*: Fed. Proc. *18*:1004, 1959. 5. Gray, A. P., *et al.*: J. Am. Chem. Soc. *81*:4347, 1959. 6. Walner, A. S.: Clin. Med. *7*:2331, 1960. 7. Clinical data from the files of the Medical Dept., Irwin, Neisler & Co., 1959. 8. Batterman, R. C., *et al.*: Am. J. Med. Sc. *238*:315, 1959.

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While the source of calories is not critical—an intake of 15 or more gm. of protein slows the blood sugar fall and may be associated with a sense of well-being lacking in low protein breakfasts. (4)

1. Tuttle, Wilson, and Daum: J. Appl. Physiol., **1**, 545, 1949
2. Orent-Keiles, and Hallman: Circ. No. 827, 1949, U.S. Dept. Agric., Washington, D.C.
3. Coleman, Tuttle, and Daum: J. Am. Dietetic Assoc., **29**, 239, 1953.
4. Maurice E. Shils—Mod. Nut. in Health & Disease, Ch. 37, 1960

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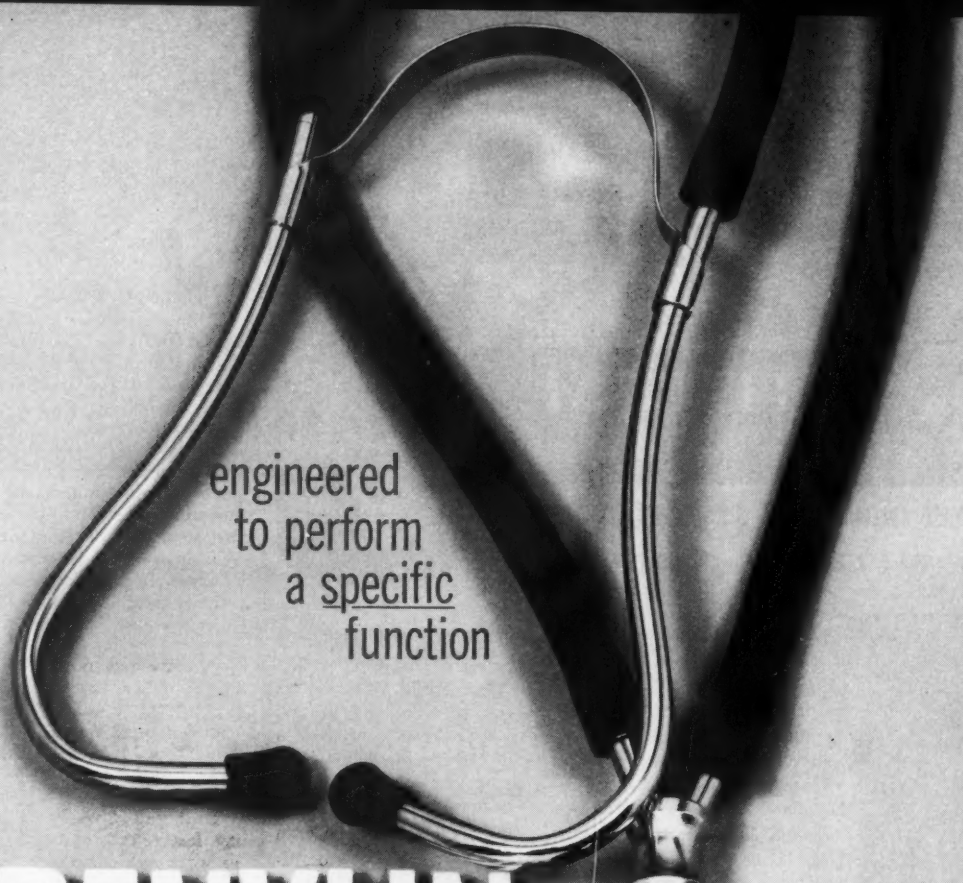

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* Hall, E. W., "The Family Doctor & Preventive Dentistry" G.P. XXII:6, Dec. 1960

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of the technical advisory committee had worked with optometrists in a veterans hospital. Likewise, the optometrist on the committee had previously worked with many local ophthalmologists. The committee decided, after much discussion, to allow optometrists to work at those clinical procedures, such as visual acuity and the Harrington-Flocks screener, which did not involve putting drops in the patients' eyes. Since many people over 40 consult only an optometrist, the committee felt that clinic utilization might be increased if optometrists were included.

Clinic hours were set from 4:30 to 8:30 p.m. to attract people who could not come during working hours. A maximum of 100 patients were to be seen by appointment at each clinic. Eight appointments were given for every 20-minute period. A keysort punchcard was designed for the clinic record to facilitate followup and evaluation. The technical advisory committee also specified the types of eye drops to be used, the method of doing the tonometry, the procedure for sterilizing instruments, and the technical information about glaucoma and the clinic that would be given to the patients after their examination.

The standards for referral set by the committee were an intraocular pressure of 25 mm. Hg or above, or a differential tension of 6 mm. Lens changes also were routinely referred. All other eye conditions were referred at the discretion of the examining physician.

PROMOTIONAL METHODS

The methods of interpreting and promoting the clinic in the community were shared by both sponsoring agencies. The health educator was responsible for coordinating all the educational efforts. Since Brookline is highly organized, it was decided to lean heavily on already existing community organizations. The promotion and interpretation of the program through professional workers and community leaders was chosen as the first step. Inservice training programs on glaucoma and its prevention were developed and presented to teachers, social workers, pharmacists, nurses, physicians, and recreation workers. These are the people who have the greatest contact with adult and older age groups. A special effort was made to insure that these people—the so-called "gatekeepers"—all had their eyes tested early so that they could say, "I have had this test and I can honestly recommend it to you. It doesn't hurt!"

During the 8 weeks preceding its opening, feature articles on the clinic appeared in the local and metropolitan press. The governor as well as the local board of selectmen appeared in several photo stories describing the program.

The Community Council of Brookline, where the idea for a clinic originated, endorsed the program and sent a letter to each of its 78 member agencies asking for their cooperation. The council also suggested that each agency might wish to plan a future educational program around glaucoma in order to interpret this new service to its members.

Shortly before the opening of the first clinic, a special issue of the *Health Bulletin* was devoted to glaucoma. This bulletin is distributed by the health department 4 times a year to each of the 18,000 households in Brookline. This issue contained a simple illustrated feature describing what glaucoma was and the specific tests which were being offered to detect it. A speakers' bureau made up of Lions Club members and health department staff was available to community groups. Along with a talk on glaucoma, the film "Hold Back The Night" was used. This Canadian-produced film proved to be far superior to anything else available to us. Exhibits were posted in various store windows. The public library developed and exhibited a very attractive display on glaucoma.

The priority on promotional efforts follows.

Block appointments were offered to captive groups, such as policemen, firemen, teachers, and members of golden age clubs, service clubs, PTA's, and religious organizations. The secretary of each group was asked to fill a block of appointments. The response was so great

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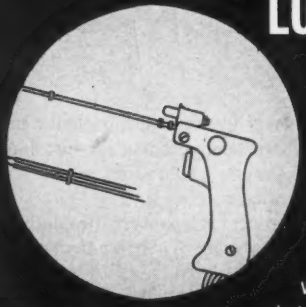

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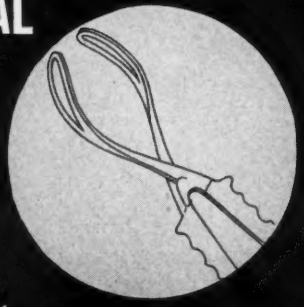

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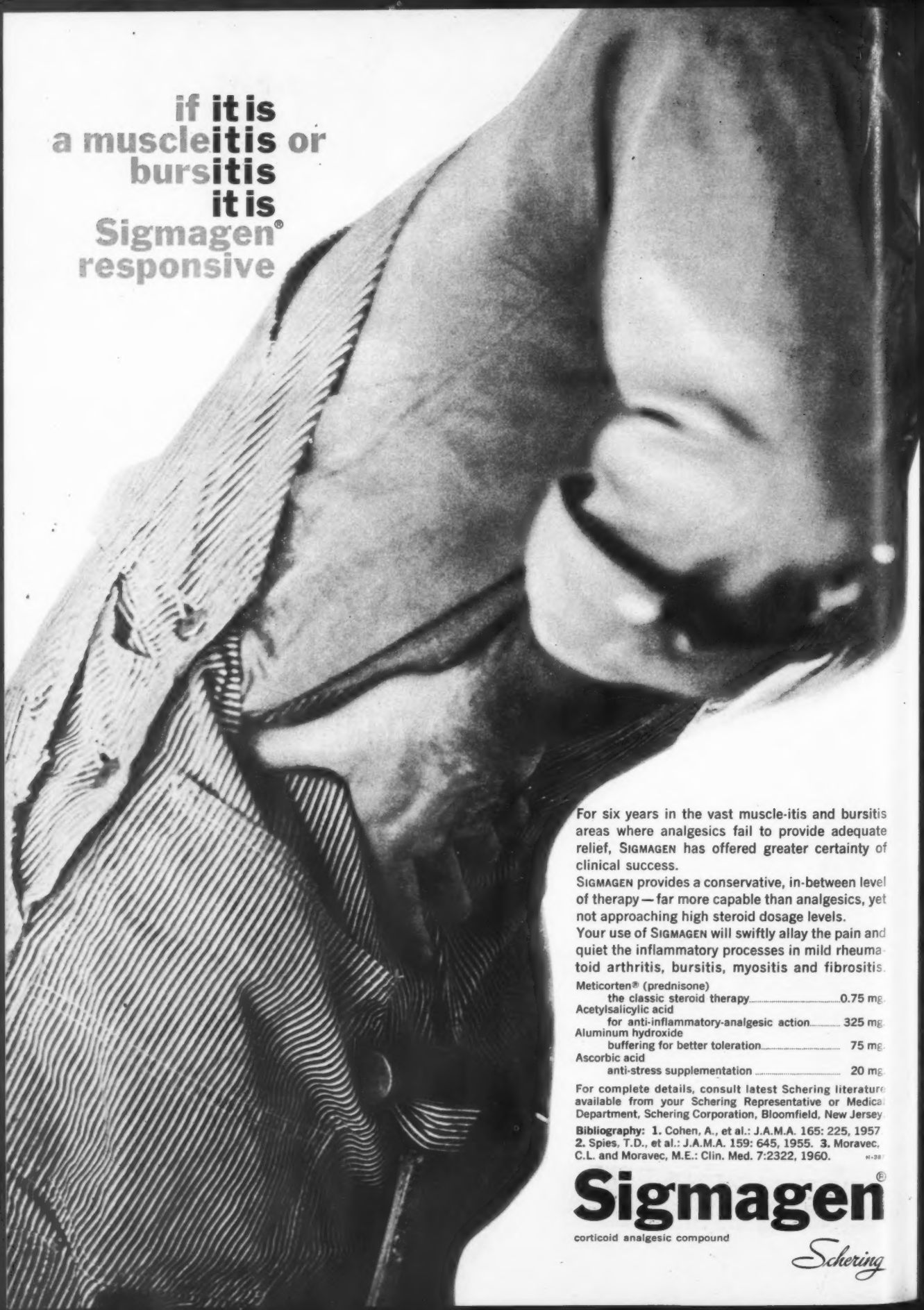

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Bibliography: 1. Cohen, A., et al.: J.A.M.A. 165: 225, 1957 2. Spies, T.D., et al.: J.A.M.A. 159: 645, 1955. 3. Moravec, C.L. and Moravec, M.E.: Clin. Med. 7:2322, 1960.

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*Grimes, H. G., and Geiger, C. J.: Am. J. Obst. & Gynec. 79:441, 1960.

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that 1 month before the clinic opened, several hundred appointments had been made.

The second wave of appointments was built upon this initial momentum. Newspaper notices and the special issue of the *Health Bulletin* contained appointment coupons which residents could fill out and mail to the health department. By the time of the first clinic, there was a backlog of 1,000 appointments. This response encouraged other organizations and individuals to jump on the bandwagon. Another technic employed at this time was to enclose postage-paid appointment cards with welfare checks. The social workers, having been previously briefed, were able to answer questions and encourage their clients to participate.

The third wave of appointments came through person-to-person contacts. As he left the clinic each patient was handed one or more postage-paid appointment cards and was asked to tell his friends and neighbors about this clinic. Volunteers from the various golden age clubs personally solicited members and nonmembers alike to sign them up. Lions Club members and their wives also helped with this personal solicitation campaign.

CLINIC PROCEDURES

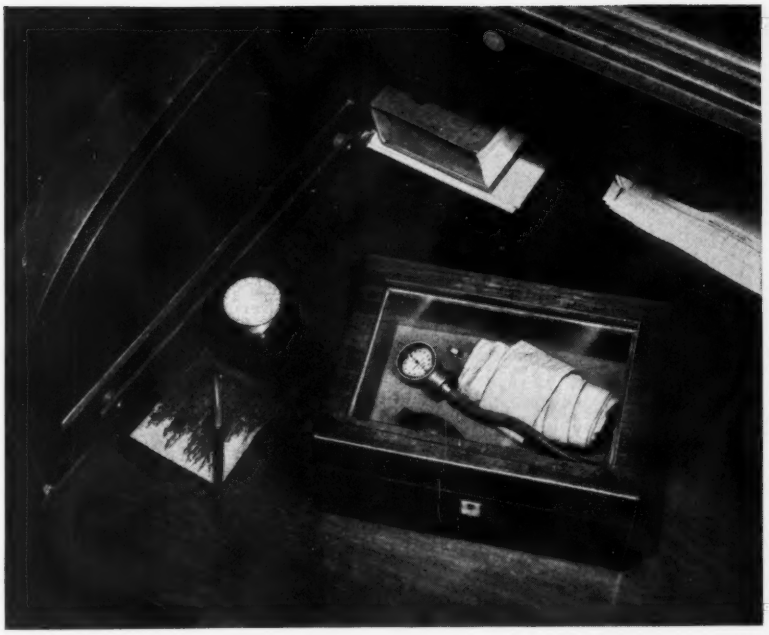
A patient entering the clinic comes directly into a large waiting room. Here the wives of the Lions Club members register him and take his personal and ophthalmic history. Behind the registration tables is an exhibit containing an automatic slide projector which allows the patient to see in advance what tests he is going to have as he goes through the clinic.

The patient is first tested for distant vision using a Snellen chart at 20 feet. This is done by an optometrist or a public health nurse. If the vision is below 20/40 he is retested with glasses or a pinhole. A volunteer collects the clinic cards and keeps them in proper sequence, calling each patient by name when it is time for his next test. At each step in the clinic procedure an effort is made to treat the patient as an individual rather than as a number.

During the first 2 years, a Harrington-Flocks screener was used to check visual fields. After evaluation of our first year's experience with this instrument, the test was dropped because it gave too many false negative results. Three out of four patients, whether or not they had any eye disease, read all the Harrington-Flocks cards correctly.[10]

At the next step, the eye is inspected and examined with an ophthalmoscope. This is done by ophthalmology residents from two Boston teaching hospitals. Finally, a resident measures the intraocular pressure using the 1955 Schiotz tonometer. All clinical procedures are supervised by a practicing ophthalmologist who is also a member of the Lions Club.

After tonometry, a public health nurse



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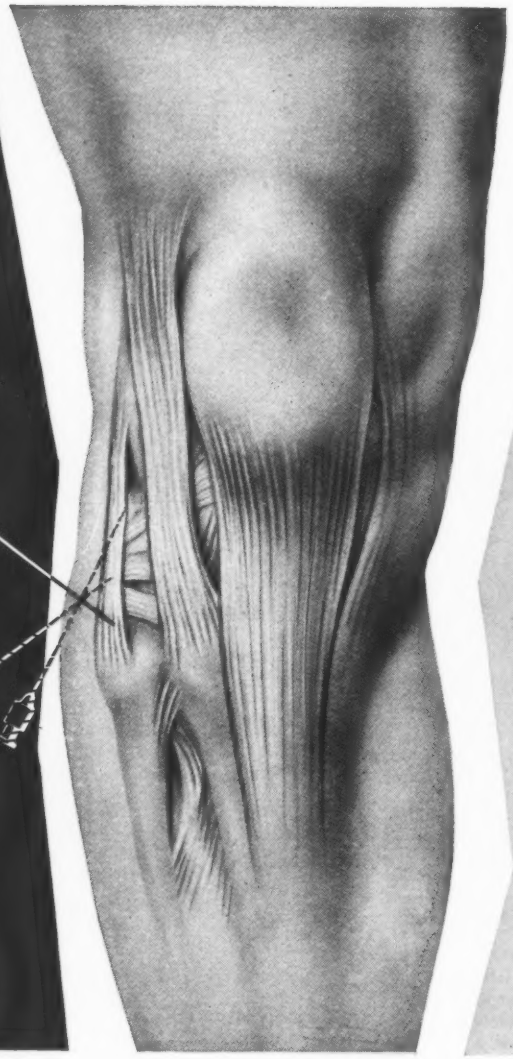

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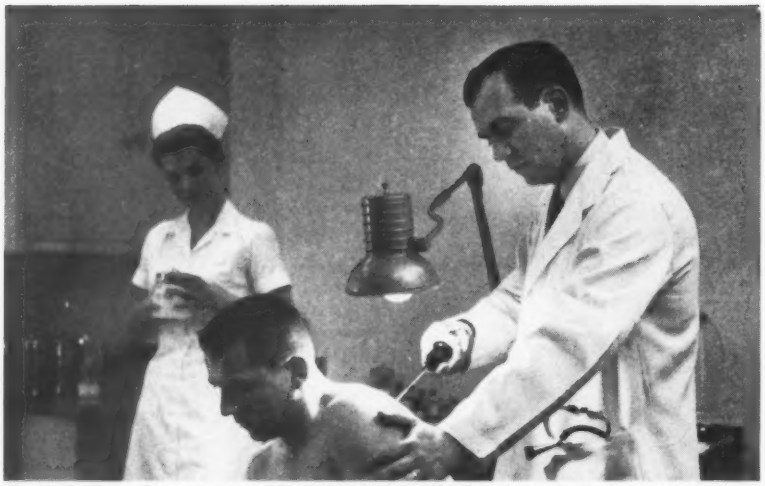

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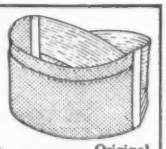

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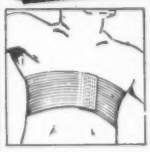

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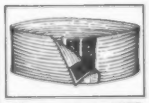

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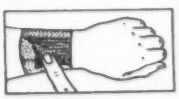

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interviews the patient. She reassures him if no abnormality was found and recommends retesting every 2 years. If ocular pathology was found, she initiates the referral procedure. When a patient is referred, a letter of explanation is sent immediately to the family physician and the eye doctor or clinic designated by the patient.

After seeing the nurse, the patient goes back to the waiting room where he is asked by a volunteer to fill out a post-clinic reaction sheet. An analysis of the answers to this questionnaire reveals patient attitudes toward the clinic procedures and indicates how the service may be improved. It also supplies information on how citizens hear about this clinic.[11]

In order to evaluate the program and maintain adequate control, a special clinical record was developed. It consisted of an easy-to-tabulate keysort punchcard. Following every clinic the senior author reviews and punches each record. He checks to be certain that full and correct information about each patient, including the results of his tests, has been properly recorded. These cards are also used for followup as well as for clinical information. Separate punches are made when a patient is referred to a physician or a clinic, when followup letters are sent and when reports come back. It is possible to determine quickly at any time the current progress of each patient being followed.

In the 43 clinics held through December 1, 1960, 3,127 patients had been examined. This is approximately 11 per cent of the eligible population. The proportion of residents examined increases with their age. Since the amount of ocular disease found is directly related to age, the program has been successful in reaching the groups with the greatest

RESULTS OF 43 CLINICS IN BROOKLINE GLAUCOMA SCREENING PROGRAM THROUGH DECEMBER 1, 1960

Patients examined	3,127
Total normal	2,446
Total referred	681
Referrals for possible glaucoma	199
Diagnosis of glaucoma confirmed	58
Previously known	17
Previously unknown	41
Diagnosis of glaucoma unconfirmed[1]	60
Diagnosis of glaucoma pending	81
Referrals for other eye conditions	482
Diagnosis of other eye conditions confirmed	226
Diagnosis of other eye conditions unconfirmed	19
Diagnosis of other eye conditions pending	237

[1]Certain patients require continued observation since they may have borderline cases that will develop into glaucoma.

Iron utilization improves the picture

Since iron utilization is regulated principally by the hormone, erythropoietin,[1] many anemic patients fail to respond adequately to iron alone because of low erythropoietin levels. However, RONCOVITE®-mf—containing cobalt, the only therapeutic agent that increases formation of erythropoietin—has proved singularly successful in iron-deficiency anemia, whether due to chronic blood loss, absorption dysfunction, or increased iron demands.[2-6] Through cobalt-stimulated erythropoietin, RONCOVITE-mf improves iron utilization and produces more rapid increases in hemoglobin and red cells.

Each tablet contains: cobalt chloride (cobalt as Co, 3.7 mg.), 15 mg.; ferrous sulfate, exsiccated, 100 mg. **References:** (1) Beutler, E., and Buttenweiser, E.: The Regulation of Iron Absorption: I. A Search for Humoral Factors, J. Lab. & Clin. Med. **55**:274, 1960. (2) Hill, J. M.; LaJous, J., and Sebastian, F. L.: Cobalt Therapy in Anemia, Texas J. Med. **51**:686, 1955. (3) Ausman, D. C.: Cobalt-Iron Therapy for Common Types of Anemia, Journal-Lancet **76** 290, 1956. (4) Craig, P. E.: Treatment of Common Types of Anemia, Clin. Med. **6**:597-601, 1959. (5) Gosselin, G., and Long, L. A.: Use of Cobalt-Iron Therapy, Appl. Therap. **2**:453, 1960. (6) Stapp, C. C.: Clinical Observations on Iron Metabolism in Pregnancy, Southwestern Med. **41**:633, 1960.

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potential of eye disease. One interesting side effect of the clinic has been reported by local ophthalmologists who say that many of their patients who come to them for refractions now demand tonometry and refer to the new program available at the health center. Some of these physicians were frank to state that although tonometry was not previously a routine practice in their office, it is now.

Of the 3,127 patients screened, 199, or 6 per cent were referred because of abnormal tensions (see table). Glaucoma was confirmed in 58 cases (2 per cent). If these findings are projected to the 81 cases for whom a definite diagnosis is still pending, a total of approximately 98 cases could be anticipated from this program. Of the other types of eye disease for which patients were referred, refractive errors were the most common (20 per cent), lens changes next (12 per cent), followed by abnormalities noted on inspection (6 per cent), and abnormal disks (9 per cent).

The expense of operating the clinic has been low. The cost of each examination is approximately $1. The cost of each case of glaucoma discovered varies between $50 and $60. When this is compared with the estimated cost to the State of $1,500 a year for the maintenance of each blind person, the economic impact of such a program can readily be appreciated. In addition to glaucoma, other eye diseases which may lead to blindness are also being discovered and referred for correction.

CONCLUSION

Glaucoma causes one out of every eight cases of blindness and occurs in 2 per cent of the population above the age of 40. It is insidious, progressive, and can lead to marked reduction in vision or even total blindness before its discovery.

Glaucoma detection with followup to treatment makes an ideal public health program. It is easily performed; it is inexpensive; and appropriate treatment halts further disability. The Brookline experience demonstrates the feasibility of conducting a sustained program for the detection of glaucoma and other eye diseases. It also demonstrates how an official agency (health department) and a voluntary organization (Lions Club) can combine their efforts to solve more effectively a community health program than can either organization working alone.

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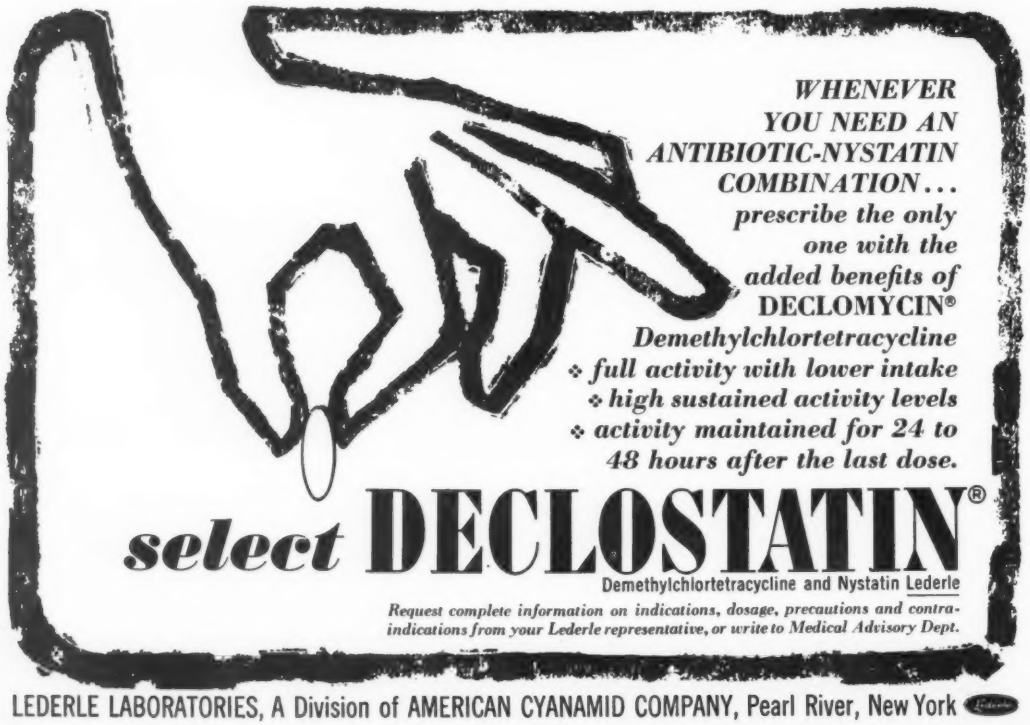
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1. Hock, C. W.: Am. J. Gastroenterol. **34**:293 (Sept.) 1960.
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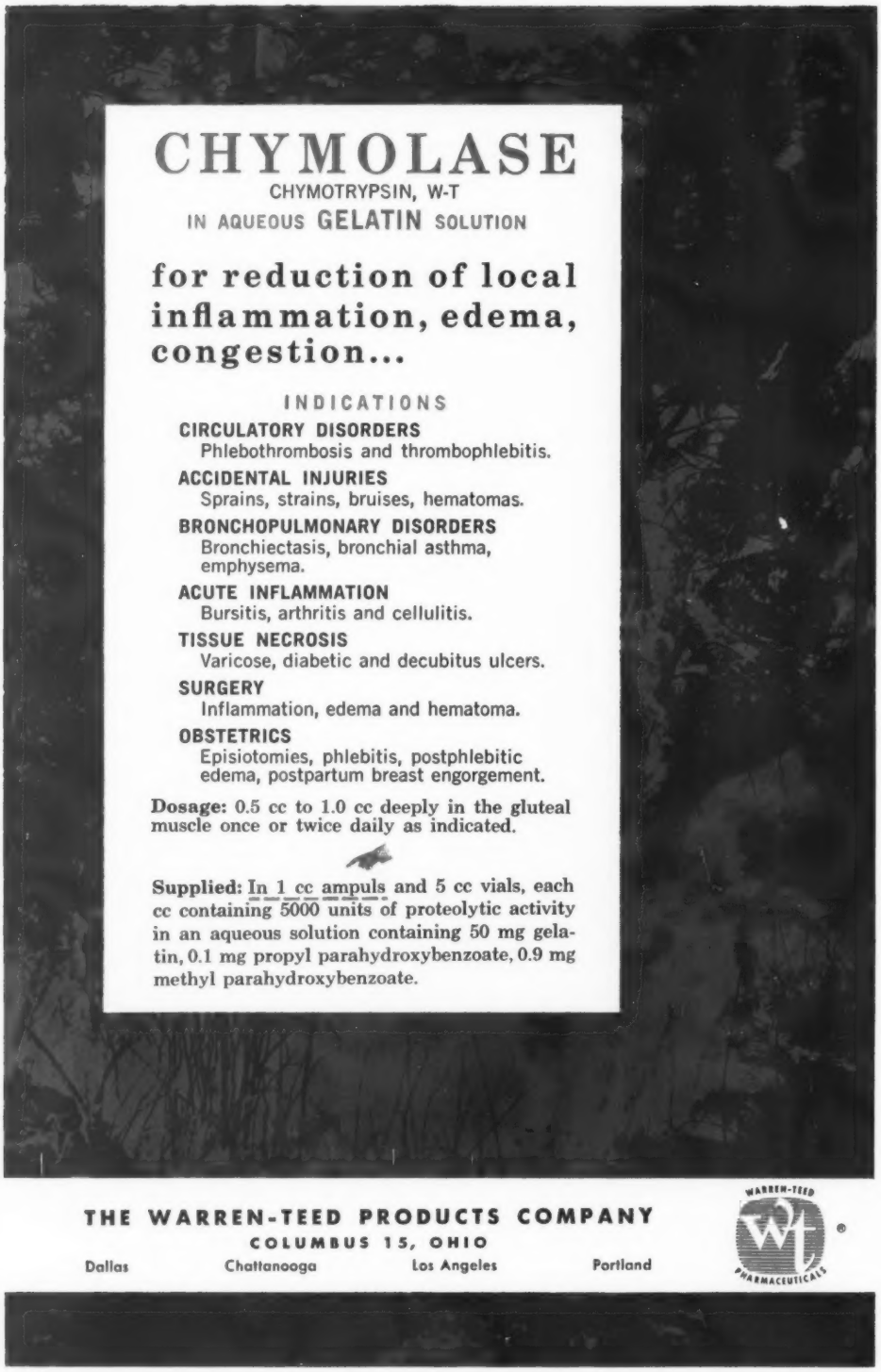

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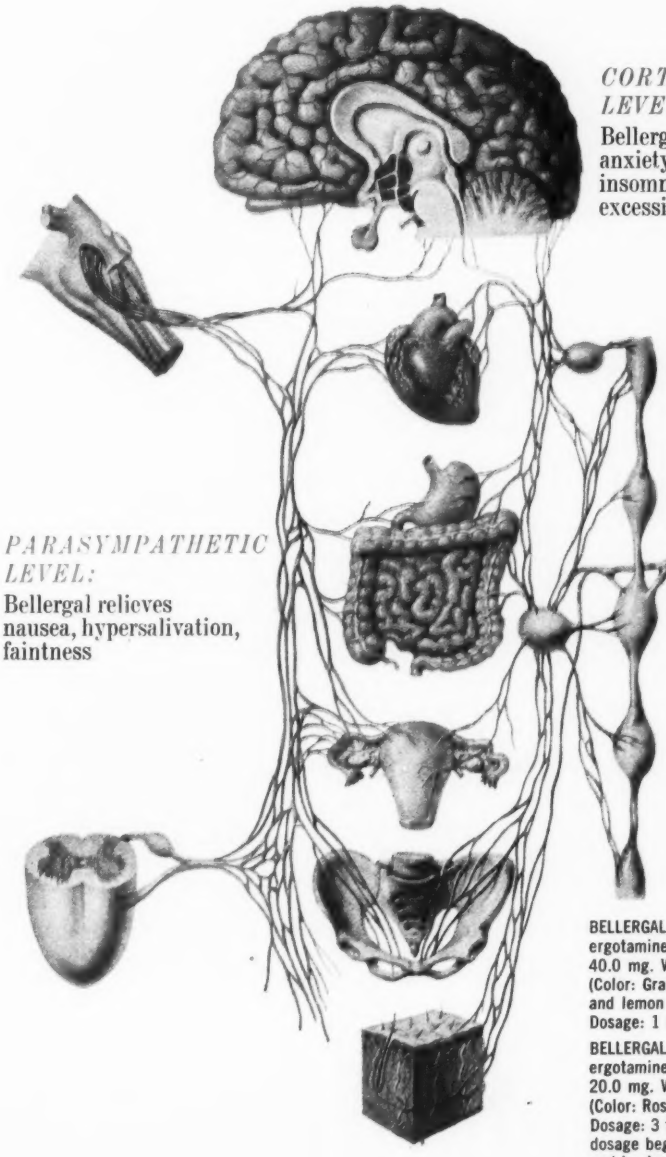

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Growth in hospital utilization*

A distinctive feature of recent medical practice has been the rapid development and increasing utilization of hospital facilities and services. The number of patients admitted to hospitals in the United States increased from about 10 million in 1940 to more than 23½ million in 1959; the admission rate rose correspondingly from 76 to 133 per 1,000 population. Not only have hospitals throughout the country been serving an increasing number of patients, but they have also been devoting more and more effort to the training of medical personnel and to research. To focus attention on the vital part that hospitals play in meeting the medical needs of the American people, the country observed National Hospital Week, May 7-13.

The modern hospital is a complex institution in terms of both equipment and technical skills. Table 1 shows the proportion of non-Federal short-term general and special hospitals with specified types of facilities and services; these hospitals accounted for at least 90 per cent of all hospital admissions in the United States during 1959. More than 9 out of every 10 short-term hospitals had operating rooms, clinical laboratories, X-ray diagnostic service, and electrocardiographic equipment; nearly as high a proportion had obstetrical delivery rooms. About three-fifths were equipped with special nurseries for prematurely born babies, and nearly one-half had postoperative recovery rooms. Although x-ray therapy apparatus was not as common, more than one-third of all short-term hospitals had such equipment; one-fifth provided radioactive isotope therapy. The larger hospitals are, generally, particularly well equipped to offer special services.

One measure of the growth of hospital utilization is the increase in hospitalized births. The number of such births in the United States has risen from less than 1½ million in 1940 to more than 4 million

*Reprinted from *Statistical Bulletin*, Metropolitan Life Insurance Company, March 1961.

TABLE 1—SHORT-TERM GENERAL AND SPECIAL HOSPITALS* WITH SPECIFIED FACILITIES
Hospitals Reporting to American Hospital Association, 1959

Type of Facility	Per Cent Reporting Specified Facility							
		By Size of Hospital (Number of Beds)						
	Total	Under 25	25-49	50-99	100-199	200-299	300-499	500 and Over
Operating room	95	88	94	95	98	97	97	99
Clinical laboratory	94	81	91	95	99	99	100	100
X-ray, diagnostic	94	81	91	93	99	98	100	99
Electrocardiograph	91	77	88	92	97	98	100	99
Obstetrical delivery room	88	80	88	87	91	92	93	94
Premature nursery	58	34	42	55	71	85	91	94
Postoperative recovery room	47	13	19	43	73	86	92	91
X-ray, therapeutic	37	6	7	23	65	86	96	99
Radioactive isotope therapy	20	1	2	7	28	58	76	87

*Except Federal. Source: *Hospitals*, August 1, 1960, Part 2, pp. 392-396.

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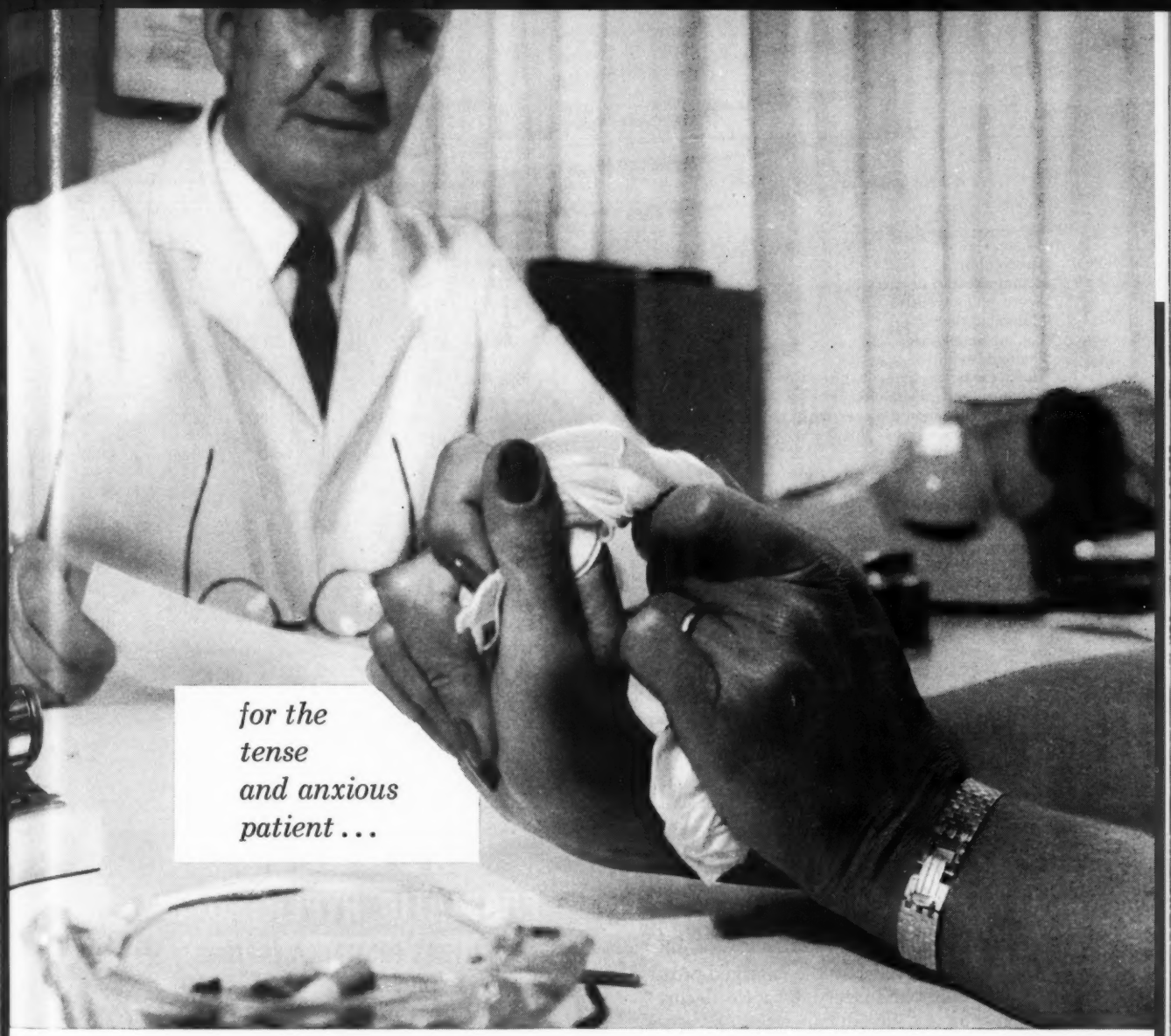

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TABLE 2—PROPORTION OF DEATHS OCCURRING IN HOSPITALS
Selected Causes. United States, 1958 and 1949

Cause of Death	Number of Deaths				Per cent of Deaths In Hospitals	
	Total		In Hospitals			
	1958	1949	1958	1949	1958	1949
All Causes	1,647,886	1,443,607	877,174	643,782	53.2	44.6
Tuberculosis	12,361	39,100	9,592	26,899	77.6	68.8
Communicable diseases of childhood*	815	2,736	503	1,359	61.7	49.6
Acute poliomyelitis	255	2,720	228	2,510	89.4	92.3
Malignant neoplasms	254,426	206,325	155,760	97,737	61.2	47.4
Benign neoplasms	4,961	5,861	3,880	4,263	78.2	72.7
Diabetes mellitus	27,501	25,089	16,803	12,591	61.1	50.2
Major cardiovascular-renal diseases	907,316	746,434	411,466	261,736	45.3	35.1
Influenza and pneumonia, except pneumonia of newborn	57,439	44,640	34,558	21,798	60.2	48.8
Ulcer of stomach and duodenum	10,801	7,809	9,250	6,283	85.6	80.5
Appendicitis	1,845	3,744	1,714	3,407	92.9	91.0
Hernia and intestinal obstruction	8,853	9,854	7,716	8,137	87.2	82.6
Gastritis, duodenitis, etc.	7,838	9,970	5,893	5,988	75.2	60.0
Cirrhosis of liver	18,638	13,694	14,221	8,990	76.3	65.7
Deliveries and complications of pregnancy	1,581	3,216	1,319	2,480	83.4	77.1
Congenital malformations	21,411	18,864	17,944	14,366	83.8	76.2
Certain diseases of early infancy	68,960	64,179	64,175	54,270	93.0	84.6
Motor vehicle accidents	36,981	31,701	15,918	15,797	43.0	49.8
All other accidents	53,623	58,405	25,091	27,197	46.8	46.6

*Measles, scarlet fever, whooping cough and diphtheria. Source: Reports of National Office of Vital Statistics.

annually in the past few years. The proportion of babies born in hospitals has increased correspondingly from 56 per cent to about 93 per cent. Undoubtedly, the growing popularity of hospitalized births has been an important factor in the reduction of the maternal mortality rate from 38 per 10,000 live births in 1940 to about 3 per 10,000 live births today.

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occurring in such institutions has been rising. As the table on page A-184 shows, the number of hospital deaths increased from nearly 644,000 in 1949 to somewhat over 877,000 in 1958, the latest year for which such data are available. Deaths in hospitals accounted for 53 per cent of all deaths in the United States during 1958, compared with 45 per cent in 1949. The number of deaths in hospitals attributed to the major cardiovascular-renal diseases rose from nearly 262,000 in 1949 to somewhat over 411,000 in 1958, increasing from 35 to 45 per cent of the total mortality from these diseases. At the same time, cancer deaths in hospitals gained in frequency from 98,000 to 156,000, and rose from 47 to 61 per cent of all deaths from malignancy.

In increasing numbers, the American people are relying on voluntary health insurance to meet hospitalization and other medical costs. It is estimated by the Health Insurance Institute that at the end of 1960 about 132 million people in the United States were protected against the expenses of hospital care, a gain of nearly 25 million in five years. At the close of last year, there were 118 million people with surgical expense insurance, 86 million with regular medical expense insurance, and approximately 25 million with major medical expense coverage.

Accidents among farm residents*

Although fatal accidents among farm residents in the United States have decreased in frequency during the past decade, they were still responsible for about 11,700 deaths in 1959. This number, which included injuries sustained by such residents both on and off the farm, was equivalent to a death rate of 55.3 per 100,000, compared with 51.5 for the whole population of the continental United States. The less favorable record for the farm people reflected their higher mortality from occupational injuries and motor vehicle accidents. It is estimated by the National Safety Council that accidents arising out of and in the course of employment caused approximately 3,400 deaths among farm residents last year, or nearly 30 per cent of their entire accident toll—twice the proportion in the population as a whole. Motor vehicle accidents, outranking every other type of mishap, took about 5,300 lives† among farm residents; this was 45 per cent of the total, a slightly higher proportion than in the general population. Accidents in and about the farm house resulted in the fatal injury of 2,700 people, while public accidents other than motor vehicle were responsible for the loss of an additional 900 lives.

One aspect of the farm accident problem merits special attention: the fatal injuries occurring on farmland under cultivation and around farm service buildings. Such accidents are responsible for about one fifth of all fatal injuries sustained by farm residents; details regarding accidents of this kind for the years 1957-58, based upon data from the National Office of Vital Statistics, are shown in the accompany table.

Machinery is the largest single cause of fatal accidents which occur in farm work areas, accounting for nearly 900 deaths a year in the United States. Reflecting the increasing mechanization of farm activities, the loss of life resulting from machinery accidents rose from 28 per cent of the total farm accident mortality in 1950 to 36 per cent in 1958. Information available from individual States indicates that a very considerable part of the toll from machinery accidents represents deaths sustained in tractor accidents. In Kansas, for example, tractor accidents

*Reprinted from *Statistical Bulletin*, Metropolitan Life Insurance Company, Nov. 1960.

†About 600 of these were occupational accidents and are included in both categories.

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General Pharmacological Properties—The IP and PO LD_{50} values for SPARTASE in rats are 4 and 19 grams/kg., respectively.

The pharmacological activity of aspartic acid has been the subject of numerous publications[1-8] and need not be reviewed.

Laborit *et al.*[9,10] studied the effects of the combined K and Mg aspartates on groups of white rats subjected to the standard swim test. It was found that duration of swim after this therapy was significantly prolonged over that achieved with other regimens attempted. After a standard rest period of 2½ hours, the aspartate-treated animals again swam longer than any other group.

Plasma ammonia levels were measured in groups of rats similarly exposed to swim effort and drug therapy. Increase in ammonia levels noted in the controls[11] was not seen in the group pretreated with the aspartates.

A group of 16 dogs breathing a mixture of 90% oxygen and 10% CO_2 was given the combined salts of aspartic acid parenterally. Plasma and expired CO_2 tension decreased, and plasma urea concentration increased immediately[12].

The administration of K and Mg aspartates to athletes demonstrated a positive effect on neuro-muscular irritability, a significant reduction in existing fatigue and a significant prophylactic effect against the induction of fatigue[10,13,14].

Indications—The use of SPARTASE for the treatment of fatigue is not intended to supplant specific treatment for accompanying organic disease or to substitute for specific indications for potassium.

SPARTASE has a wide range of clinical utility in the management of the fatigue syndrome. It may be used effectively in the management of many fatigue problems, whether or not associated with functional or organic disease. SPARTASE is particularly useful in treating the tired patient with no evidence of organic dysfunction.

Dosage and Administration—The adult dose of SPARTASE is two 500 mg. tablets after the morning and evening meals. Approximately four days therapy are required before subjective clinical improvement may be noted; it is suggested that SPARTASE administration be continued for at least two weeks before the patient is re-evaluated.

Contraindications and Side Effects—Nausea, abdominal discomfort and diarrhea have been noted occasionally. These symptoms may be minimized by proper administration of dose after meals.

There are no known contraindications to SPARTASE therapy.

References—1. H. Kamin, P. Handler: J. Biol. Chem. *193*:873-80 (1951). 2. H. Resnik, M.F. Mason: Am. J. Med. Sci. *192*:520-5 (1936). 3. J.A. Brockman, Jr., S.L. Burson, Jr.: Proc. Soc. Exptl. Biol. Med. *94*:450-2 (1957). 4. H.H. Tallan: J. Biol. Chem. *224*:41-5 (1957). 5. B.J. Miller, V.W. Ciacci, S.P. Reimann: Growth *5*:329-50 (1941). 6. S. Edlbacher, K. Schmid: Helv. Chim. Acta *28*: 1079-88 (1945). 7. D.P. Tschudy, M. Marshall, A. Graff, S. Graff: Cancer *11*:984-95 (1958). 8. M.N. Mickelson, R.S. Flippin: Arch. Biochem. Biophys. *64*:246-8 (1956). 9. H. Laborit, R. Moynier, A. Trzebski, G. Guiot, C. Baron: Compt. rend. soc. biol. *151*:1383-6 (1957). 10. C. Vial: Imprimerie des Tournelles, Paris, 1959. 11. H. Laborit, L. Obrenovitch, P. LeGuen: Compt. rend. soc. biol. *152*:1359-60 (1958). 12. H. Laborit, P. Niaussat, J.M. Jouany, B. Weber, J. Martin, C. Baron: Compt. rend. soc. biol. *152*:1094-7 (1958). 13. Thiebault: Bull. mens. soc. med. mil. franc. *52*:139-49 (1958). 14. H. Laborit, B. Weber, P. Niaussat, J.M. Jouany, G. Guiot, J. Zawadowski, C. Baron: Anesthésie et analgésie *15*:480-94 (1958).

MORTALITY FROM NONTRANSPORT ACCIDENTS ON THE FARM,* BY TYPE
Continental United States, 1957-58

Type of accident	Average annual number of deaths			Per cent of total, Both sexes	Per cent Male Deaths of total
	Both sexes	Males	Females		
Nontransport—Total	2,405	2,194	211	100	91
Machinery	871	827	44	36	95
Drowning	380	317	63	16	83
Firearms	312	298	14	13	96
Falls	197	175	22	8	89
One level to another	136	130	6	6	96
Blow from falling objects	136	126	10	6	93
Fires and burns by other means	113	94	19	5	83
Accidents caused by animals and insects	98	84	14	4	86
Electric current	81	79	2	3	98
Lightning	44	40	4	2	91
All others	173	154	19	7	89

*Includes land under cultivation and service buildings, but excludes farm homes.
Source of basic data: Reports of the National Office of Vital Statistics.

were responsible for about four fifths of the deaths involving farm machinery during 1955-59. A considerable number of these fatal injuries resulted from tractors overturning while being driven on a steep grade.

One out of every 7 fatal accidental injuries occurring in farm work areas is attributable to drowning. Although ponds, drainage ditches, and other water resources are assets to a farm, they also constitute hazards, particularly for children and adolescents. A study published several years ago by the United States Department of Agriculture showed that 30 per cent of the drownings on the farm were among children under 5 years of age; nearly as high a proportion of the victims were in the age group 5-14, and about 15 per cent were 15-19 years. Thus, youngsters under 20 years of age comprised nearly three fourths of the drowning fatalities.

Firearms take about 300 lives a year on cultivated farmland and around farm service buildings. Some of these victims, however, are residents of urban places and other nonfarm areas. Falls, blows from falling objects, and fires and burns by other means each account for more than 100 deaths annually on farms.

Fatal injuries from each type of farm accident are largely concentrated among males, reflecting the fact that they generally do the hazardous tasks around the farm. The mortality from on-the-farm nontransport accidents among males is relatively high at the adolescent ages and highest in later life. In 1957-58 the death rate increased sharply from 11.5 per 100,000 under age 15 to about twice that figure at ages 15-19. It then decreased a little and remained at the level of nearly 20 per 100,000 for ages 20-44. The rate subsequently increased with advance in age, reaching 38.9 per 100,000 at ages 65 and over.

Nonfatal injuries likewise impose a heavy burden on farm residents. Data derived from the U. S. National Health Survey indicate that, in the year ended June 1958, 5,616,000 rural farm residents suffered injuries involving at least one

day of restricted activity or medical attendance; this is more than one fourth of the rural farm population. The frequency of such accidents among males is nearly 1½ times that among females; for work accidents alone the ratio is about 4 to 1.

Most deaths now occur in hospitals*

An increasing number and proportion of the deaths in the United States are occuring in hospitals, a reflection of the growing use being made of these institutions in the diagnosis and treatment of serious illness. The number of deaths in hospitals increased from about 644,000 in 1949 to more than 877,000 in 1958; the proportion that these deaths were of the national total rose from 45 to 53 per cent.

The geographic divisions of the country vary appreciably with respect to the proportion of deaths occurring in hospitals. In 1958 such deaths were relatively most frequent in the Mountain and Pacific Divisions, where they accounted for slightly more than 57 per cent of all the deaths in those areas. The proportion was lowest in the East South Central Division, but even there more than two fifths of the deaths took place in hospitals. The record for individual States shows that in only one—Mississippi—was the figure as low as 37 per cent. On the other hand, in six States—North Dakota, South Dakota, Wyoming, Montana, Nevada, and Colorado—and the District of Columbia the proportion was at least 60 per cent.

Many more deaths occur in general hospitals than in all other types of hospitals combined. Nine out of every 10 deaths occurring in hospitals, and not far from half of all the deaths in the United States, take place in general hospitals. The remaining tenth of the deaths occur in nervous and mental hospitals or in other special hospitals, such as maternity, tuberculosis, and chronic disease hospitals.

A large proportion of the deaths from each of the major causes take place in hospitals. Thus, in 1958 about 411,500 deaths from the cardiovascular-renal diseases, or 45 per cent of all the deaths from these conditions in the United States, occurred in hospitals. The proportion is even higher for deaths from cancer (malignant neoplasms). For the malignancies as a group, it was slightly over 60 per cent; for cancer of the respiratory system it was 66 per cent, for lymphosarcoma 74 per cent, and for leukemia and aleukemia it exceeded 80 per cent. About 64,000 deaths from "certain disease of early infancy" (largely birth injuries, postnatal asphyxia, and immaturity without further qualification), or more than 90 per cent of all deaths from these causes, took place in hospitals.

It is expected that an increasing number of people with terminal illnesses will utilize hospital services as the bed capacity and diagnostic and therapeutic facilities of these institutions expand further. Even now at least 90 per cent of the general hospitals in the United States have operating rooms, basal metabolism apparatus, clinical laboratories, electrocardiograph equipment or X-ray diagnostic service. Furthermore, an increasing number of people avail themselves of hospital services through voluntary health insurance. It is estimated by the Health Insurance Council that there are now more than 130,000,000 people in the United States protected against the costs of hospital care—more than twice the number covered only 12 years ago.

*Reprinted from *Statistical Bulletin*, Metropolitan Life Insurance Company, Nov. 1960.

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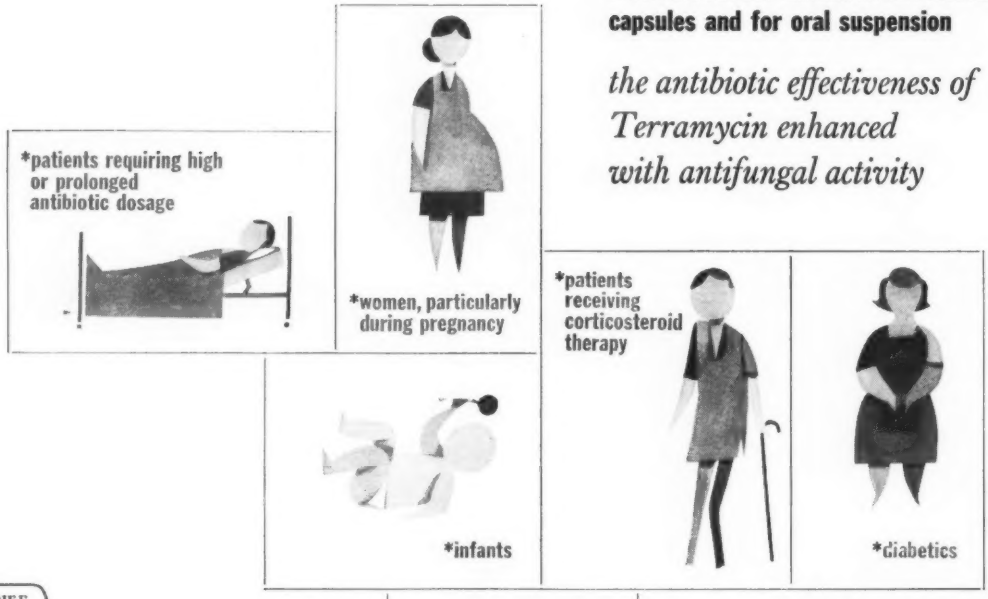

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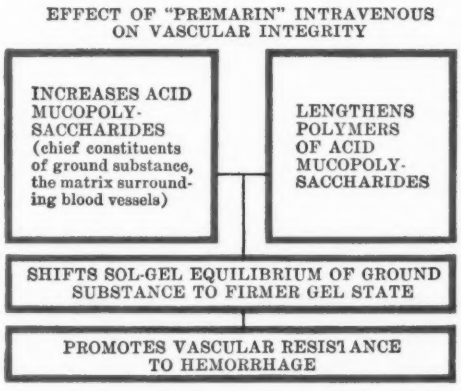
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*Schiff, M., and Burn, H. F.: A.M.A. Arch. Otolaryng. 73:43 (Jan.) 1961.

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Books received

Books received for review during the period from July 5 to August 5 are listed below. Reviews will be published as space permits.

RELIEF OF SYMPTOMS. By Walter Modell, M.D., F.A.C.P., Director of Clinical Pharmacology and Associate Professor of Pharmacology, Cornell University Medical College, New York, N. Y.; Attending Physician, New York Veterans Administration Hospital, New York, N. Y.; Associate Visiting Physician, Bellevue Hospital, New York, N. Y.; Member, General Committee on Revision, United States Pharmacopeia XVII; Editor, Clinical Pharmacology and Therapeutics. Ed. 2. Cloth. Pp. 374, with illustrations. Price $11.50. The C. V. Mosby Company, 3207 Washington Boulevard, St. Louis 3, 1961.

MASSAGE TECHNIQUES. A Case Method Approach. By Frances M. Tappan, B.S., M.A., Associate Professor, Director, School of Physical Therapy, University of Connecticut. Paper. Pp. 204, with illustrations. Price $5.50. The Macmillan Company, 60 Fifth Avenue, New York 11, 1961.

THE CHEMOTHERAPY OF TROPICAL DISEASES. By Sir Philip Manson-Bahr, M.D., F.R.C.P., D.T.M. & H. (Cantab), Consulting Physician to the Hospital for Tropical Diseases, London; and John H. Walters, M.D., F.R.C.P., Lt. Colonel I.M.S. (ret.), Physician, The Hospital for Tropical Diseases, London. Cloth. Pp. 164, with illustrations. Price $7.00. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

CLINICAL DIAGNOSIS BY LABORATORY EXAMINATIONS. By John A. Kolmer, M.S., M.D., Dr.P.H., Sc.D., LL.D., F.A.C.P., F.A.C.D. (Hon.), Professor Emeritus of Medicine and Director of The Institute of Preventive Medicine and Public Health, Temple University School of Medicine; Professor of Medicine, Temple University School of Dentistry. Ed. 3. Cloth. Pp. 543, with illustrations. Price $10.00. Appleton-Century-Crofts, Inc., 34 West 33rd Street, New York 1, 1961.

LEUKOCYTE AGGLUTININS. Properties, Occurrence and Significance. By Sven-Age Killmann, M.D., Brookhaven National Laboratory, Associated Universities Inc., Upton, L. I., N. Y. Cloth. Pp. 96. Price $5.00. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

CLINICAL ENDOCRINOLOGY. For Practitioners and Students. My Laurence Martin, M.D. (Camb.), F.R.C.P. (Lond.), Physician to Addenbrooke's Hospital, Cambridge; Assessor to the Regius Professor of Physic, University of Cambridge. Ed. 3. Cloth. Pp. 275, with illustrations. Price $8.00. Little, Brown & Company, 34 Beacon Street, Boston 6, 1961.

OBSTETRICAL EMERGENCIES. By Denis Cavanagh, M.B., Ch.B. (Glasgow), F.A.C.O.G., Assistant Professor of Obstetrics and Gynecology, University of Miami School of Medicine, Miami, Florida. Cloth. Pp. 380, with illustrations. Price $12.50. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

CLINICAL OBSTETRICS AND GYNECOLOGY. Volume 4, Number 2. Perinatal Mortality: Edited by Robert E. L. Nesbitt, Jr., M.D. Radiation Therapy: Edited by A. N. Arneson, M.D.; and James F. Nolan, M.D. Cloth. Pp. 288, with illustrations. Price $18.00 a year. Paul B. Hoeber, Inc., 49 East 33rd Street, New York 16, 1961.

SPEECH AND HEARING PROBLEMS. A Guide for Teachers and Parents. By Charles E. Palmer, Ph.D., Assistant Professor; Speech and Hearing Consultant, Special Education Center, Northwestern State College, Natchitoches, Louisiana. Cloth. Pp. 137, with illustrations. Price $5.50. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

MINDS THAT CAME BACK. By Walter C. Alvarez, M.D., Emeritus Professor of Medicine, University of Minnesota (Mayo Foundation). Cloth. Pp. 384. Price $5.95. J. B. Lipincott Company, East Washington Square, Philadelphia 5, 1961.

CHEMOTHERAPY OF TUBERCULOSIS. By William F. Russell, Jr., M.D., M.S., Assistant Director for Clinical Research, National Jewish Hospital at Denver; Assistant Clinical Professor of Medicine, University of Colorado School of Medicine; and Gardner Middlebrook, M.D., Director, Division of Research and Laboratories, National Jewish Hospital at Denver; Associate Professor of Microbiology, University of Colorado School of Medicine. Cloth. Pp. 130, with illustrations. Price $6.50. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION. Volume 52. Compiled by George G. Stilwell, A.B., M.D. Cloth. Pp. 868, with illustrations. Price $15.00. W. B. Saunders Company, West Washington Square, Philadelphia 5, 1961.

THE USE OF ISOTOPES IN HAEMATOLOGY. By L. G. Lajtha, M.D., D.Phil., Mem-

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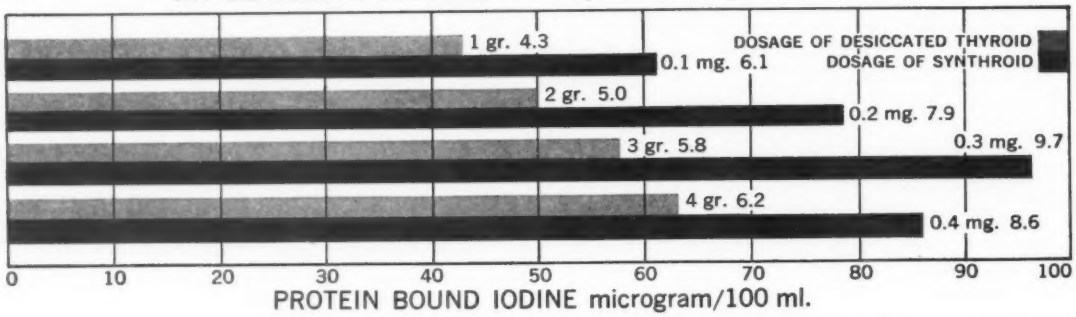

*Average pretreatment level, 2.38 mcg./100 ml. 195 determinations of serum P.B.I. level were made in these 28 patients. Four weeks were allowed for stabilization in a given dose.

†"Equivalent" dosage: 0.1 mg. of sodium l-thyroxine (SYNTHROID) is equivalent to 1 gr. desiccated thyroid. Reference: 1. Sturnick, M. I., and Lesses, M. F.: New England J. Med. 264:608 (Mar. 23) 1961.

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THE ELECTROENCEPHALOGRAM OF THE NORMAL CHILD. By Alberto Fois, M.D., Assistant and Docent of Pediatrics, University of Siena; translated and edited by Niels L. Low, M.D., F.A.A.P., Assistant Professor of Neurology, Columbia University College of Physicians and Surgeons, New York. Cloth. Pp. 124, with illustrations. Price $6.75. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

VERTEBRAL AND CAROTID ANGIOGRAMS IN TENTORIAL HERNIATIONS. Including Roentgen Anatomy of the Tentorial Incisure. By Hans F. Plaut, M.D., Chief, Radiology Service, Veterans Administration Center, Dayton, Ohio; Clinical Assistant Professor of Radiology, Ohio State University, College of Medicine, Columbus, Ohio; formerly, Instructor in Radiology, University of Cincinnati College of Medicine, Cincinnati, Ohio. Cloth. Pp. 155, with illustrations. Price $10.50. Charles C Thomas, Publisher, 301-327 East Lawrence Avenue, Springfield, Illinois, 1961.

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M 57	1½	4	400	1.7	0.15	8	290	4.4	29
F 71	2-3	8	260	0.7	0.2	10	200	7.0	11
F 65	2-4	8	552	2.3	0.2	8	299	4.5	9
M 67	1-3	5	360	2.4	0.2	6	230	6.0	12
F 70	3-4	9	600	1.7	0.2	4	340	6.6	4
F 62	1-3	10	299	1.6	0.1	8	164	3.9	3
F 59	4	8	420	2.0	0.2	3	215	7.0	5

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Reference: 2. Macgregor, A. G.: Lancet 1:329-332 (Feb. 11) 1961. *Brit. Pharmacopeia

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1. Johnson, P. C., and Sevelius, G.: J.A.M.A. 173:1231 (July 16) 1960. 2. Winsor, T., and Humphreys, P.: Angiology 3:1 (Feb.) 1952. 3. Plotz, M.: New York J. Med. 52:2012 (Aug. 15) 1952.

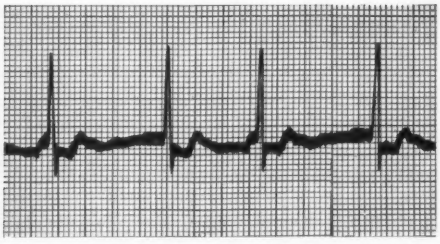
Full dosage information, available on request, should be consulted before initiating therapy.

*Electrocardiograms, radioisotopic tracings and case histories on file in the Medical Department of Warner-Chilcott Laboratories.

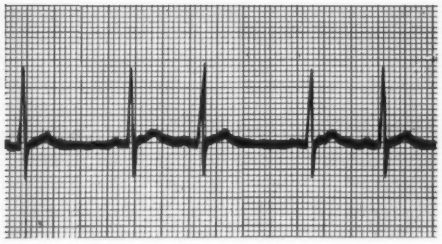
Electrocardiographic evidence:

Peritrate increases myocardial blood flow in a patient with angina*

The patient—tugboat captain, 57, with angina but no history of infarction. Blood pressure, 130/80. Normal sinus rhythm; ventricular rate, 72. Blood cholesterol, 344-583 mg./100 cc.



before Peritrate—S-T segment depressed after standard exercise.



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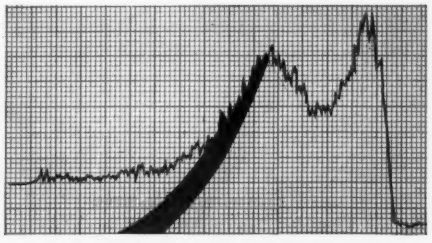
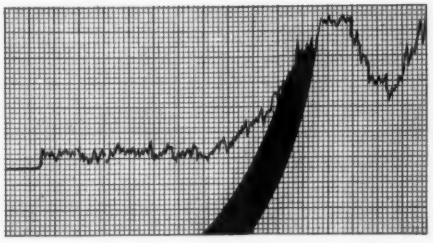
Radiocardiographic evidence:

Peritrate increases myocardial blood flow in a postcoronary patient without angina*

The patient—woman, 74, with 15-year history of hypertension. Posterior myocardial infarction in 1955. No angina. Before Peritrate: blood pressure, 210/110; pulse, 70. After Peritrate: blood pressure, 202/108; pulse, 68.



before Peritrate—Radioisotopic tracing shows myocardial blood flow (shaded area) after infarction reduced to 2.6% of cardiac output.



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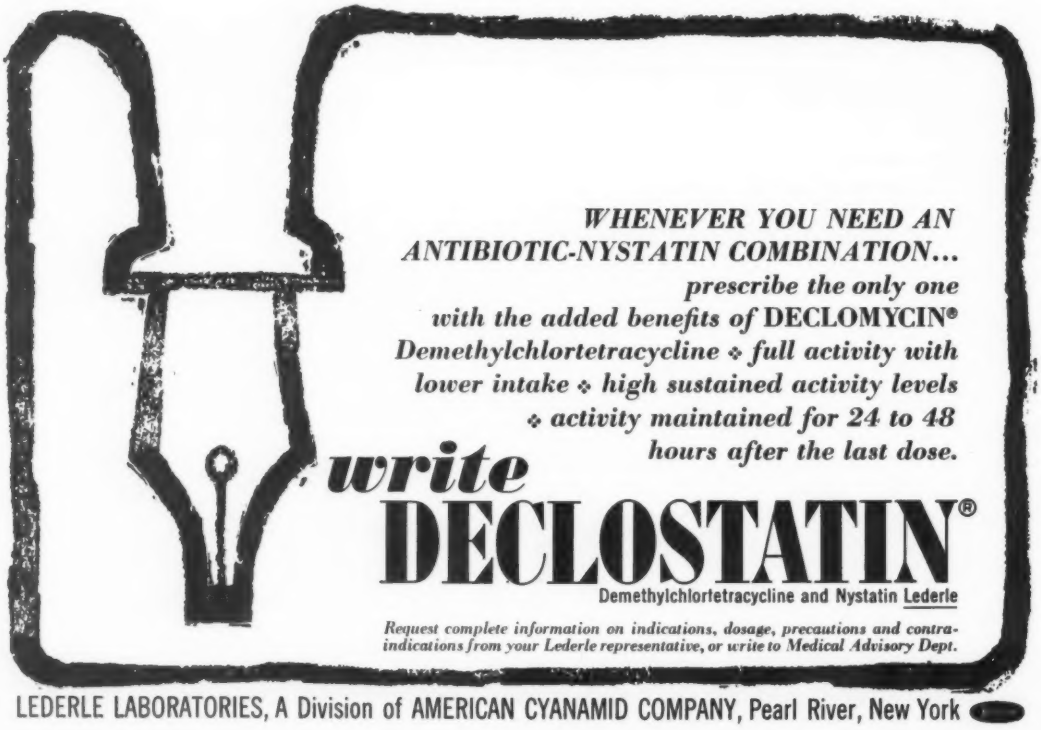
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1. Greif, E. and Scheuer, J.: J. Mount Sinai Hosp., Nov./Dec. 1960

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1. Ernst, E. M.: *Pennsylvania M.J. 63*:708 (May) 1960. 2. Settel, E.: *Clin. Med. 7*:1835 (Sept.) 1960.

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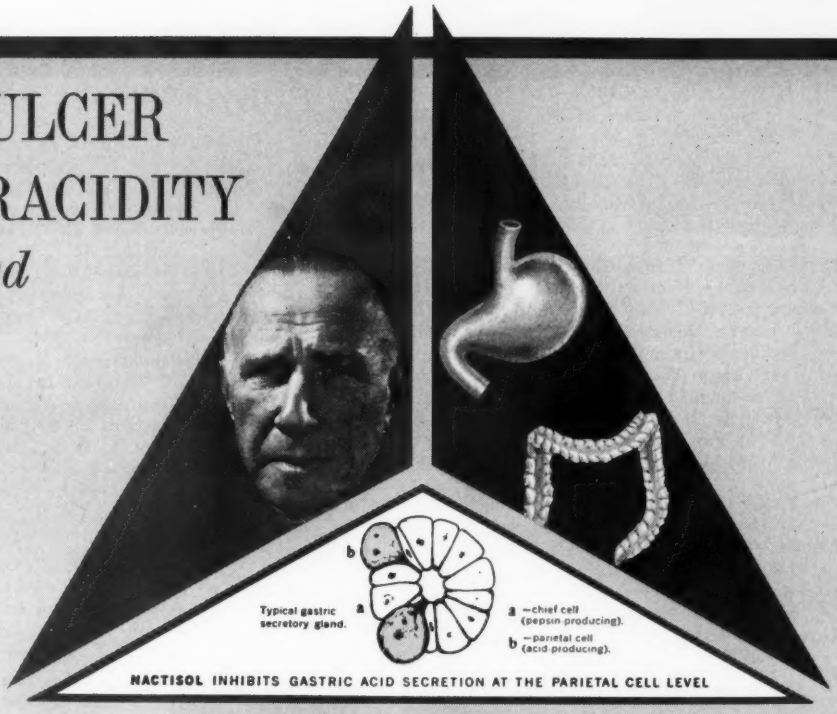
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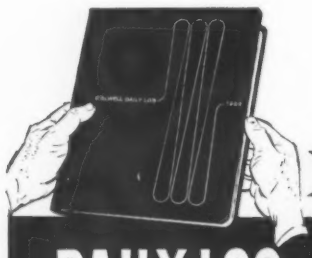

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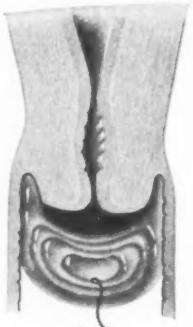

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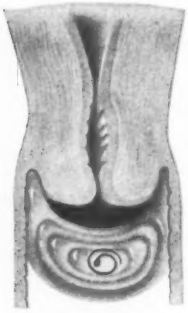

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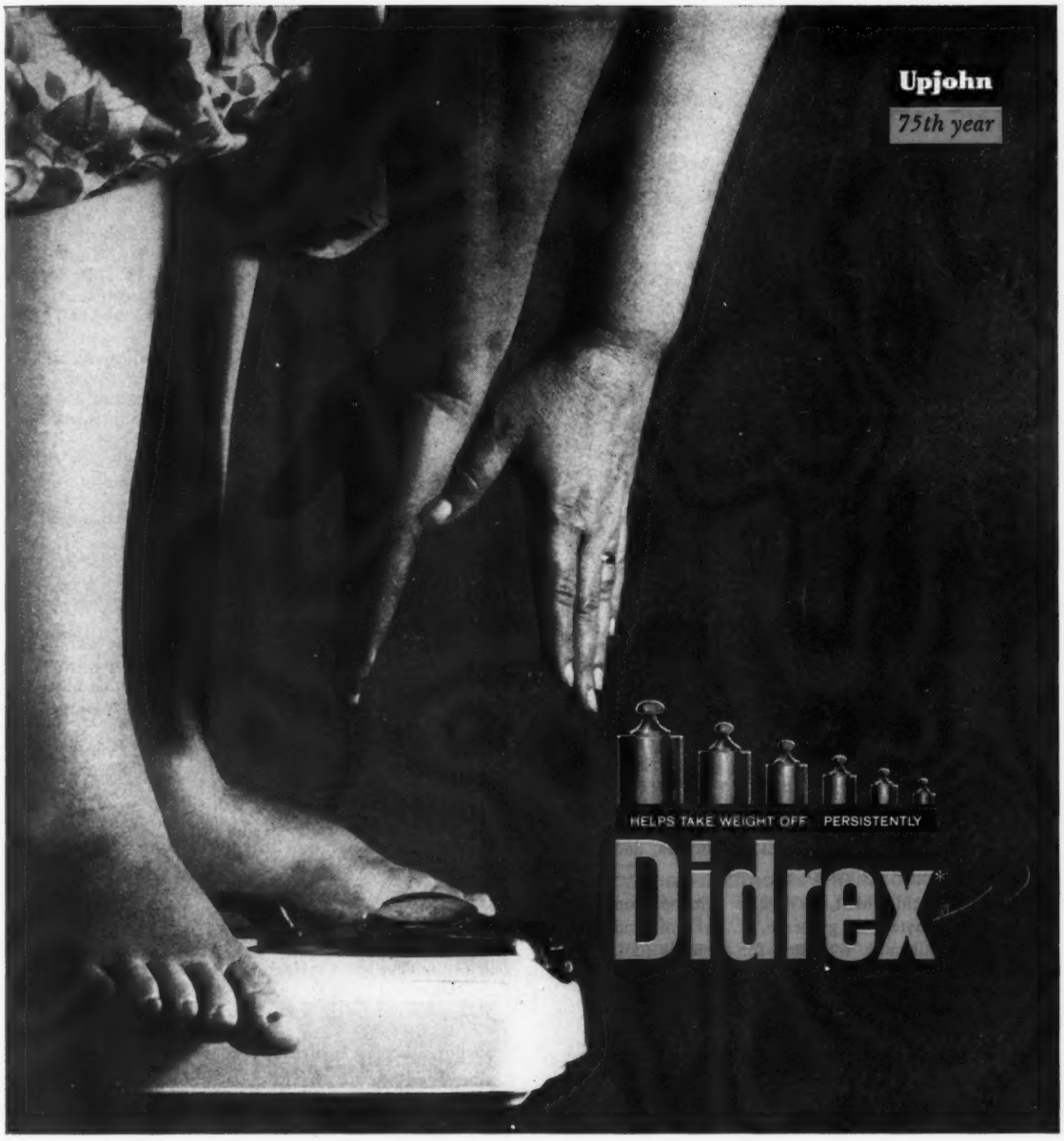

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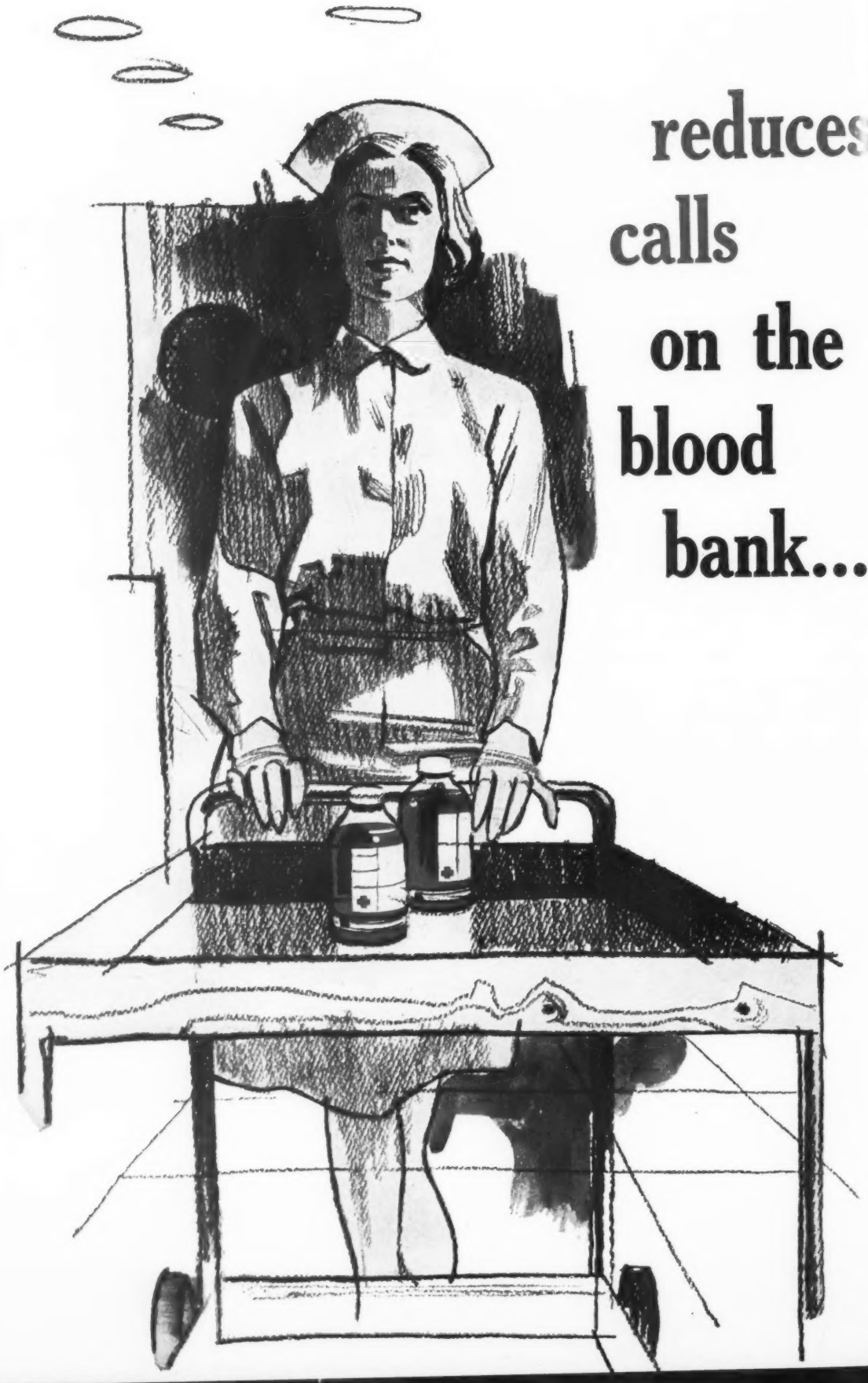

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(1) Hootnick, H. L.: Jnl. Amer. Ger. Soc., 4:1021-1030, 1956. (2) Cass, L. J. and Frederik, W. S.: Jnl. Lancet, 73: 414-416, 1953. (3) Marshall, W.: So. Dak. J. Med. & Pharm. 8:151:153, 1955.

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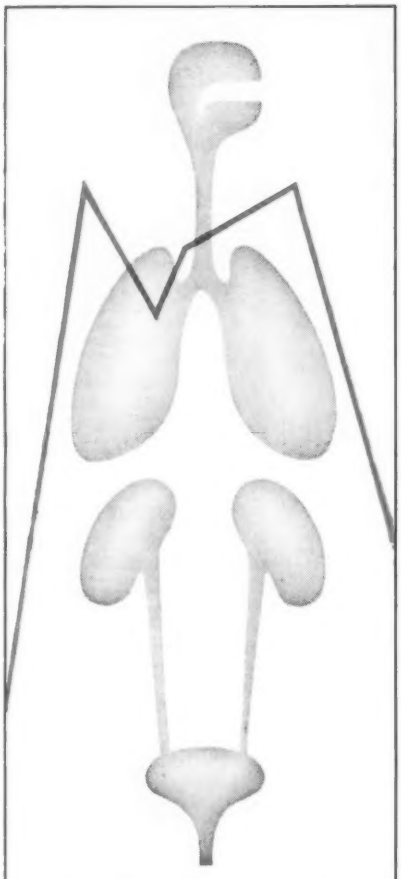

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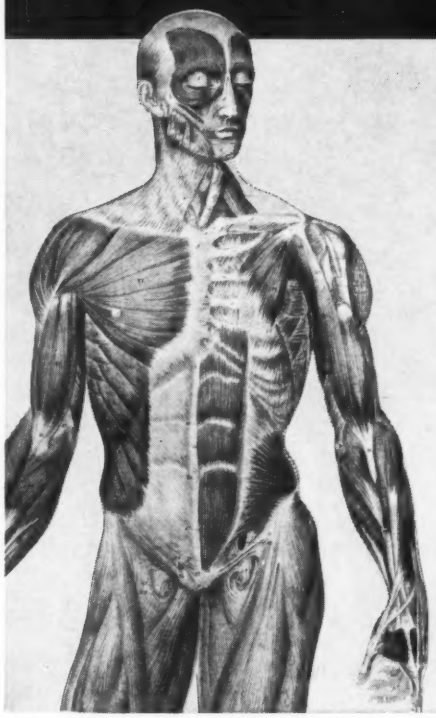

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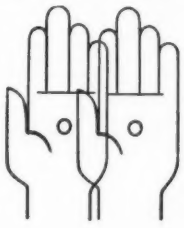

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